side. /Gunda sat behind the line of boys, in a deep shadow, to show that he was 159
'ashamed' and respected (feared, *koa*) the wedding scherm. 585

One of the boys began to play, not their ceremonial music or special wedding music, but songs of the *//guashi*, as they call them, the little wordless melodies these [533] people compose about happenings in their lives, about pleasures or distress, about their moods. They play and sing these melodies for hours upon hours in the afternoons when they are resting or in the evenings by their fires, and they played for hours that night at the wedding fire.

Soon young guests began to arrive, the children of both werfs with whom /Nai played, all of them younger than the boys who attended /Gunda and the girls who carried /Nai. The youngest guest was the ubiquitous three-year-old boy who never missed anything. No adults came.

One boy brought four mangetti nuts with him and roasted, cracked, and ate them himself. That was all that appeared by way of a feast. Di/ai said that they would like to have given the children something to eat but there was nothing in the werf that night. Even though the others had had something to eat, the bride and groom would have had to abstain. They must not talk or eat, to show they are 'ashamed'. The young guests seemed to enjoy themselves, nevertheless, and were still singing and chatting when I left at midnight.

Soon after sunrise the following morning—/Gunda had already departed—/Nai's mother went to the wedding scherm and sat down beside the embers of the night's fire. /Nai stood shivering beside her in her little genital apron and the duiker skin [291] which women wear around their buttocks and up between their legs, but stripped of her kaross. The mother had brought a little fat (eland fat, if they had it, would be [825] used) and a bit of powdered red stone, one of the red earths (*/gam !gai gwoie*), mixed with fat. She rubbed /Nai all over with the fat, and drew a line on her forehead and [302] a circular design on her cheeks with the red powder mixed with fat. Over in werf 2, Gao, Nai's stepfather, presented /Gunda with a blanket.

This completed the wedding ceremony.

/Nai was a lively child who loved the dancing and singing games the girls play. 159
She often danced alone, tapping her bare feet on a stone in rapid rhythm or making a 462
game of printing a design in the sand with tiny steps. She liked babies and as often as not had her infant half-brother or some very small cousin tied to her back. That morning she appeared to turn into a housewife as though it were her next blithe step. When the women went to gather veldkos, she put on her own little duiker skin [222] kaross, took her digging-stick and went with them. At the end of the day, when they returned in the slanting sunset light, she had two big roots. She went straight to her own fire, blew on the embers, added wood, and sat down. Three ostrich egg shells [415] full of water and her digging-stick were her household goods. These she arranged beside the scherm. /Gunda came and sat down opposite her. She smiled at him and set the roots in the ashes to cook.

It has been said in talks with informants that the bridegroom must bring an 159
antelope which he himself has killed to the parents of the bride before the wedding, 183
but no animal had been brought; there had not been a scrap of meat in the werf for 585
days. I asked Di/ai about this. 'Oh, that,' she said in effect. 'Yes, he should give me an antelope, but we thought we would have the wedding first and that /Gunda would

logical father, as well as his mother's husband, should do something nice for him. 159 Perhaps when he receives his first assegai his begetter will give it, for that is a very 848 proud thing—but we do not know what the future holds for these people or where they will be by then.

The dominance of men

Wives are much desired by the young men, who usually wait for years for their 562 infant fiancées to grow up, and by men who want second wives, and by widowers. [581] /Kung women are not only precious as mates, they are the food-gatherers and supply [222] more of the daily food than the men do. Hunting[1] is very arduous in the Kalahari and [462] the hunters succeed in bringing a big meat animal to the werf only about once or [224] twice a month. Meanwhile women have dug roots and gathered berries and the other wild plant foods to feed their families every day. /Kung women in their two roles make a very great contribution.

In /Kung society, however, the magnitude of their contribution does not make women dominant. There are factors which bring the men forward clearly into dominance and leadership. [142]

The primary factor is undoubtedly strength. /Kung men are small and slender, 147 but they are wiry and vigorous. With their strength they carry and protect the very life of their people. When they swing their weapons and implements and their small children on to their shoulders and stride out in front of the women, the image seems to reveal, as vividly as if a great artist had painted it, how the laden following women are borne up by the strength of their men and take heart from them.

Another factor which brings men clearly forward is the character of hunting and 462 its reward. Women bring the daily food, but there is only drudgery in digging and 562 picking in the hot sun and trudging back in the early evening to the werf with heavy roots and berries and babies all sagging in the pouches of their karosses, a small dead [222] tree or two on one shoulder for the night fire, possibly another child astride the other shoulder. Many of the vegetable foods, furthermore, are rather tasteless and harsh and are not very satisfying. There is nothing splendid about returning with vege- [262] tables and wood. The return of the hunters is vastly different. The intense craving for meat, the anxiety that goes with the hunt, the deep excitement of the kill, finally [262] the eating and the satisfaction reach to the very core of the people, engaging power- [224] ful emotions. Once, when an eland had been killed and the hunters were sighted with the meat on their backs, moving in a dark, lumpy, bobbing line in the golden [152] grass, we heard the sound of voices in the werf rising in volume and pitch like the hum of excited bees. Some people ran toward the hunters, others crowded together at the edge of the werf, some danced up and down, the children squealed and ran about, the boys grappled and tussled together. The motion and sound had the effect of a vibration. Another time a young man who was said to be the best hunter in the region (/Qui Hunter we called him, his people called him Short /Qui), had been 462 charged by a magnificent cock ostrich on a big open pan where there was no refuge. 562 He knelt facing the creature till it was within close range and shot an arrow straight 224

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[1] John Marshall has described /Kung hunting in his film, *The Hunters*, Peabody Museum Film Study Center, Harvard University, and in 'Man as Hunter', *Natural History*, the magazine of the American Museum of Natural History, New York, vol. lxvii, No. 6, June, and No. 7, August, 1958. [113]

/147 cont./

241 Agriculture is unknown. Only accidentally grown food plants are known.

222 311 In order to promote the growth of the veld crop, the Bushman burns off the grass. A Bergdamara with whom I rode across a burning grass veld said to me: "The Bushman is making his garden."

462 Work of the men:

- Hunting
- Occasional veld crop gathering
- Collecting wood
- Fetching water
- Preparing hides
- Making clothes
- Making weapons and mortars
- Making strings
- Making fire by twirling

Work of the women:

- Hut construction
- Cooking
- Veld crop collecting
- Maintaining the fire
- Getting wood
- Getting water
- Making women's clothes

412 The only "agricultural implement" is a digging stick (see Fig. 9).

222 For one who is not a botanist it is impossible to describe in intelligible terms, even roughly, the numerous wild food plants of the Auin. The collection of specimens must take the place of a description. Unfortunately, I had no opportunity to make such a collection.

For the person who is familiar with the Southwest African veld crops, I shall give a list of some food plants, which, however, is by no means exhaustive.

Tschamma
Spiny tschamma
Ontjes of the Boers
Water tubers
So-called "wild potatoes"

/147 cont./

222 Rosinkis of the Boers

So-called "wild cucumbers"

Mushrooms which grow on termite hills

251 [415] The veld crop that has been gathered is kept in the huts in little sacks made of duiker or ibex leather.

/148/ The Auin also stores small caches of provisions by burying sacks of veld crops; he likewise buries tschamma or ostrich egg shells filled with water. In the tops of large trees one often finds, aside from animal hides, provisions of veld crops which are kept there. [Fig. 9 appears here.]

423 Land is held in common, that is, it is the common property of a horde consisting of several families. The game in this territory, as well as the wood and the veld crops, is exclusively for the use of the members of the community that holds the land. The watering places that are to be found there are available for general use, but only if water is abundant. If water is scarce, the local group that holds the land has exclusive right to it.

361 423 621 The local groups sometimes live at considerable distances from one another so that the same land is used by several settlements. The settlements, after all, do not consist of a fixed number of families, but rather of those who are gathered together in fortuitous groupings as the occasion arises. Whatever the accidental composition of the settlements may be, their members always move within a definite area, and it is always the members of the same larger horde who form the settlements.

423 619 [685] Friendly hordes permit tracking, that is, game that has been wounded on the land of one horde may be pursued on the territory of a friendly horde. A part of the booty is allotted to the "landowner" within whose territory the game is killed. A definite agreement is required in each case since the Bushman attacks on sight any strange Bushman on his family's terrain.

628 Blood vengeance is not sought for a violation of territory if the local groups are especially friendly. The offender is driven off and, in addition, just as in Prussia, his "firearms" and booty are confiscated. The policing of the terrain is done by each Bushman on his communal land.

[721] If women are caught trespassing, they are taken prisoner and led to the settlement of the owners of the terrain. This frequently leads to war if the women are harmed sexually during their captivity.

[Text continues on page 32]

Auen

301

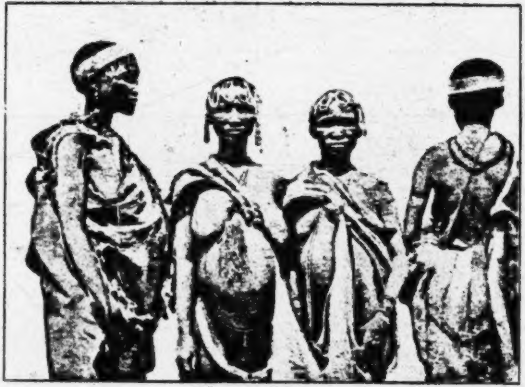

Photo. 20.
Chains of Ostrich Egg Shells as Ornaments.

291

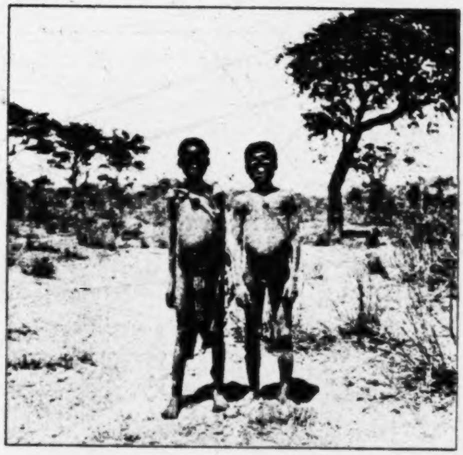

Photo. 22.
Children's Clothing.

222
412

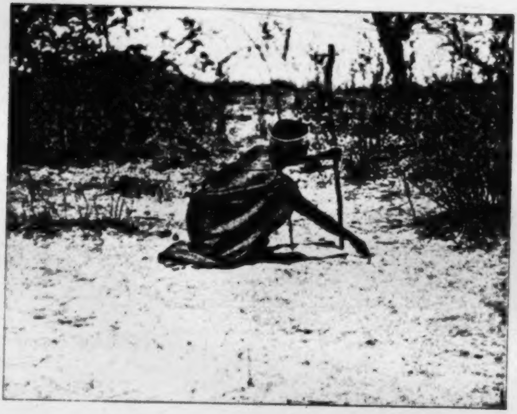

Photo. 24.
Use of the
Digging
Stick
(digging up
veld food).

WESTERN OTSIMPOLO VELD

[7 cont.]

222 825 The honey badger, !uisa (N. !ous), which leads to the bees, is followed ever so eagerly.

224 The common wild pig (gariba), the kudu (daub), the gemsbok χ'uaba (N. /gaib), and all the small antelopes are hunted. Pits are no longer known, although they used to dig them in former times.

If they decide to go hunting, sexual intercourse must be [834] avoided the night before. In the evening the hunters go into the forest and spend the night there. Before dawn they rise and pray:

[539] Pu, pu, Eró, /nari dsu /ari mate	God, tomorrow early we receive.

When a piece of game has been killed, one of the hunters cuts a piece of flesh from the animal's body and hands it to the leader of the hunt. This meat is called am-shái-khe. A fire is made, and this piece is placed on it. When it is roasted, the leader cuts off a piece and shouts:

[539] Ero, Ero, Ero, ha gore, ha gore	Erob, Erob, Erob, eat, eat
i Khe Khandi ô	With us flesh.

After a pause:

ha lĕ a lĕ ha góre o Khandi ô	Come! Come! Let us eat flesh.

Now the roasted flesh is consumed. Nothing is thrown away or left behind for Erob.

Then the game is cut up, and everyone goes home with his portion.

136 Snakes are not rare, although they are by no means as common as in the stony regions of the southwest.

The boa constrictor eats human beings; if it catches a Bushman, it starts to consume him at the legs!.

132 821 731 In spite of the timber forest, the danger of drought is great. Erob sends rain. When there is a drought, the Bushmen dance and pray:

[539] Ero, Ero, Ero, /ga !goro	Erob, Erob, Erob, we are dying of thirst
/ga-wi -ma ta re	Water give us.

177 776 782 [8] It is very interesting to observe how in these certainly very ancient hunting and rain prayers the former old heathen gods' names Huwe and χ'amab were replaced by the Christian "Ellob."

I asked the people whether they knew any other prayers and received the following answer: "We know very well that

[12 cont.]

843 262 The pregnant woman may eat no "ongaka" and no bushbuck (okapundja, //airibkhe); she is allowed to eat hares.

844 Birth takes place in the hut. Men may not be present. As soon as the umbilical cord (//náëba) has fallen off, the child's hair is cut and buried. Then the child is carried out of the hut. [553] The father receives it and gives it a name, which is chosen quite arbitrarily.

764 As soon as death occurs, the corpse is unclothed, wrapped in hides or blankets, and is placed in the grave on its left side in an extended position with the head toward the west. Brushwood is placed on the covered grave. People come there to weep. Offerings are not brought.

224 [177] At the beginning of the hunt, certain ceremonies are performed, which I believe have in part been taken over from the Ovambo.

The hunters meet at a certain place in the forest (Khoá !Khuásha). Every hunter brings a twig with omsati leaves; these are thrown together in one place (omsati-//khái-wa), and a circle is drawn around it in the sand. Each hunter steps into the circle and on the leaves and says:

[539] //am ≠haiba, //am ≠haiba (?)

[782] The leader answers:

!Khu !Khu /ao /ao /auschá Lord! Lord! We must now go hunting!

When a wild animal has been killed, the lucky marksman first cuts a piece of flesh from it, roasts and eats it, and then divides the meat among his fellow hunters. No offerings are made.

224 422 This procedure is of the greatest interest. In the lower form of hunting practiced by primitive peoples, the individual huntsman is the undisputed owner of the game he has killed. In the case of the more highly organized hunting that these Bushmen practice today, the property right of the individual hunter is still stressed through these ceremonies, although ultimately the hunter receives no more meat than his companions.

222 [184] [462] [457] [233] The gathering of veldkost does not have the great significance here that it does in the east. After all, the women already commonly cultivate a little garden plot, and the youngsters herd a few goats, while the men still practice hunting as their main occupation.

[12 cont.]

000 439 occupation. Even among the nomadic groups, however, meat, hides, and so forth are commonly traded for millet.

[222] Also, the Blacks like to have veldkost on their table, and the Bushmen, like our sponge and berry gatherers, use their knowledge to supply them and carry on petty trade with their veldkost, as well as with honey.

222 137 This is the reason that veldkost, which is either scarce or not very tasty, is not gathered at all any more; indeed, the knowledge of its presence is even disappearing. We must also not forget that the black shepherd boys long ago acquired the knowledge of the Bushmen by observing them. As a result, the number of those interested has naturally climbed sharply, and the veldkost plants have become rare. The following kinds are still regularly gathered:

222 /airoba (ombimbo)	Sweetish, very starchy tubers, like large potatoes.
/érui (omauungă)	Galls on the leaves of the omsati tree.
≠gan-i (esarata)	Small fruit.
!Khui-i (oombi)	Dates.
!Korob-ke (oompali)	Bulbs at the roots of a liana.

251 439 Dried meat is made from kudu flesh, which in part is kept and in part sold.

278 [13] Arrow poison is made from the sap of a tree
(Euphorbiacea), !Khores-Ke. The Ondonga themselves make no
[439] arrow poison, but buy it from the Bushmen for one to two sh per
752 portion. There is no medicine against arrow poison. Deep incisions are made at the place where the arrow entered, and after blood has flowed freely from the wound, it is sucked. In the case of snakebite the same procedure is followed, and some arrow poison is placed on the wound (!!!).

278 609 Our Bushmen denied any knowledge of poisons added to food. Only the "evil Bushmen" in the east had such knowledge, they claimed. This statement scarcely deserves credence.

177 In clothing, dwellings, and weapons, as well as ornaments, not much that is original remains. The process of Bantuization is much further advanced in the material culture than in the spiritual culture. It is, after all, easier to part with clothing than with ideas.

!KUNG

[20 cont.]

648 put themselves under a chief, a Herero half-breed named
621 Krüger, whose position was acknowledged" (see p. 87). "In
622 Naidaus a Bushman leader named Aribib introduced himself,
who, like Krüger in the east, was recognized as the captain of the
Bushmen in the west" (p. 88).

114 "During the journey of Captain Volkmann in the year
1902 to the Okovanggo, the !Kung Bushmen provided extensive
help. Volkmann describes these !Kung in the following manner:
147 'The Bushmen, who are almost totally naked, are very sensitive
to the cold. In the morning each Bushman has a burning log in
372 his hand, which he holds close to his chest. The other hand is
placed on the shoulder with the upper arm pressed close to the
body. At the resting place the log is used immediately to make
481 a fire. When a Bushman walks in front of the horse as leader, he
222 springs with incredible speed, now here and now there, to get a
tuber or root out of the ground. Various berries growing on low
276 shrubs are also very popular. Anything that can serve is used as
a tobacco pipe: kudu horns, calabashes, hollowed fruit of the
Strychnos, old metal cartridge shells, and so forth. Most of all
they like to smoke through water, which is never renewed. When
they run out of tobacco, they boil the bark of a tree in the thick
tobacco water, dry the bark, which has some tobacco taste, and
smoke it' " (p. 180).

101 F. Seiner reports the following concerning the divisions
of this tribe:
131

"The Kung, to the best of our present knowledge, are divided into four groups. The western group seems to extend from the Portuguese border near Kurinkuru along the route via Tschitschib to the Omuramba u Owambo and then seems to be bounded by the latter and in the east by the line Nuragas--Blockfontein. The Karakuwisa group bordering them to the east inhabits the valley of the Omuramba u Omatako from Karakuwisa to Blockfontein during the dry season, and during the rainy season also the steppes 100 to 150 kilometers east and west of the Omuramba and the latter itself up to the Kanovlei. The more southerly group extends from the latter in the Omuramba to around Osondema; we shall call these Nog-au, who have already settled in the central Kalahari and can scarcely be classed with

[32 cont.]

222 Termites are captured in two ways. During the night holes
are dug near the tall termite hills, and these holes are illuminated
with wooden torches. A hide is placed on the floor of the hole,
and soon so many termites are on it that the hide can be carried
home. The second method is used to catch those termites that
have no structures above ground, but have a network of corridors
running horizontally immediately below the surface. A hole is
dug deeper than the corridors, and the termites fall into it as
they run frightened back and forth on their [33] horizontal paths.
[821] This kind of termite serves as a weather prophet for the rain
[787] doctor, since they construct the most openings facing upward when
224 a rainy year is in prospect. The lion was not hunted. In olden
262 times, only the old people ate the large game. The flesh of
predatory animals is forbidden to all children; on the other hand,
there is no prohibition against eating hare.

224 Naturally, the Bushmen are very anxious to have success in hunting. !Khu himself, the great captain, brings luck in hunting. He orders the supreme //Gauab (/Nawa) to direct the arrow. The doctors always pray to the great captain to send hunting luck, but there is no specific formula. They do this "quietly to themselves." An old prospector in Kalkfeld told me that he had seen the following among the !Kung Bushmen: "Before they go hunting, they draw the outline of the animal in the sand and with all kinds of ceremonies they shoot an arrow into the drawing. Where the figure is hit, the game will also be struck."

I shall now render fairly literally the course of a kudu hunt as it was described to me by a Bushman: "When I have found a kudu track, then we follow it very quietly and when we have found the place where the kudu ate, then one must be very careful. One person goes ahead, and the others follow. Now, when I see the kudu standing, I take out the poisoned arrow and shoot. Then I look to see what the kudu is doing or shoot once more; then I follow him to see whether the arrow will drop out; if the arrow falls out, I take it and see how deeply it penetrated into the kudu. Then I have to go back to the other hunters and state exactly how everything was. Then we go home. One should not run after the kudu, but must leave it alone. The person who

[36 cont.]

312 Dolichos seineri Harms (eona), and the Convolvulacea Ipomoea
824 seineri Pilger (eawa); the enormous tubers of the latter two may weigh up to 150 kilograms. Considerably more important for the natives than these 'water roots' is the Curcurbitacea Citrullus naudinianus Hook. (orura of the Herero; gab of the Hottentot); without their juicy gourds, which occur in great quantities and for the most part are edible, most of the central Kalahari would be impassable during the dry season, even for the Bushmen."

Further, F. Galton (1) reports:

[113] 1. F. Galton, Tropisches Südafrika, p. 101.

312
825 "In practice, the first hopeful sign when people are looking around for water is a flight of guinea fowl; next, following the habits of the land, each tree is carefully examined until a parrot is sighted, an object visible even at a great distance because the bird likes to sit on the uppermost branches. A parrot is rarely more than half an hour away from water, and the same applies to baboons. If one proceeds with careful observation and takes a probable direction, he will see doves flying about; then little birds are found in all the bushes, and they are close to it."

10. The Veldkost

222
776 Just as //Gauab accompanies the hunter on the chase, he is also the companion of the women who go to look for veldkost. If //Gauab takes delight in a woman, he will break the bones of an animal, killing it, and will lead the woman to it. If, however, //Gauab is angry at a woman and she finds no veldkost, then she becomes angry, gets up early in the morning, abuses //Gauab, and then takes medicine and washes her face so that //Gauab will not recognize her. Then she goes into the veld and finds something.
[782] //Gauab receives no offerings from the veldkost. The celebration
222 of the first fruits of the veld described by Vedder is no longer held.
[887] The oldest woman is brought to eat samples of each type of veldkost that is brought home for the first time in the year. Then the second oldest woman takes a taste, and so on down the line.

[35 cont.]

●222 When all the old women have made their tests, then the children also get some, and the veldkost is, so to speak, made available for general consumption. When a woman has found a spot where (423) there is a great deal of veldkost, she makes a sign at this spot, and then everything growing there belongs to her. No one will take any of it.

(262) There were and still are a whole assortment of types of (888) socha veldkost reserved for the old people. [Fig. 3 appears here.]

11. Ergology

Fire

372 The Bushmen believe that there was a time when they had 773 no fire. The following legend tells how they obtained it: "The ostrich had a firebrand under his wing. He, the owl, and Heiseb played together. Then the ostrich took fright at the owl because he thought the owl had horns. He advised all of them to sleep for a little while. When the owl was asleep, he blew at it and saw that it merely had little tufts of feathers and no horns on its head. Thereupon he awakened the two others again and invited them to go on playing. Then Heiseb said: 'Dear ostrich, please wave your wings.' The ostrich did so, and as a result its firebrand fell to the ground. Heiseb picked it up and threw it to the fig tree, and since then man has had fire." -- The narrative probably comes from the legend-circle of the Hei//om Hottentot. Otherwise, Heiseb never appears in !Kung stories. 372 Two pieces of wood from the fig tree are still used occasionally to make fire. For the most part, the most popular devices for making fire are a striking iron and flint; matches are less [36] prized. A pair of fire sticks, the sucking reeds, a few poisoned arrows, and a bird arrow make up the permanent inventory of the quiver.

≠Auin
Naron
Nogau

[72 cont.]

169 children, who are always approximately two or three years apart.
Among the Naron the bride is formally abducted; the word
585 for "to marry" is the same as "to catch." Actually, however,
[583] negotiations precede this abduction. Among the Naron exogamy
582 now applies only to actual siblings. After the wedding the young
couple moves to the village of the bride's parents and sometimes
591 stays there for years. There is also infanticide among the Naron.
847 Otherwise, however, the Bushmen are greatly attached to their
855 children.

5. State and Law

Among the ≠Auin, the chief's position is hereditary in the
622 man's tribe. The same is true among the Nogau. Among the
[178] Naron there are no actual chiefs any more. The last one lost his
authority by staying on the farms most of the time as a worker.
Bleek believes that formerly such a chief ruled 30 to 50 families.
[701] In most recent times all these tribes had a war chief, at least
nominally.

422 Among all three tribes the conception of private ownership
685 of utilitarian objects is very strongly developed, and theft is
punishable by death. Every kin group has a certain territorial
district. The boundary markers are not clearly defined everywhere
423 in this flat terrain, so that crossing them does not have the same
serious consequences as it does in the north. On the other hand,
a person who finds game that was killed by arrow poison but not
shot by him, may not take any of it. The gathering of veldkost
is permitted everywhere. A person who finds a stock of honey, on
the other hand, makes a sign there, and it is henceforth his private
[222] property. Among the ≠Auin individual Bushmen burn parts of the
[425] veld, and all the veldkost that grows there is regarded as the individual's private property.

628 The feuds between individual kin groups are designated as
721 wars, but since legal revenge is practiced almost exclusively
against members of other hordes, every [73] enforcement of
the law at the same time means war. Among the Nogau, war
is ceremoniously announced by messengers.

/253 cont./

224 the large bullfrog, whose bass voice resounds in all the puddles during the rainy season. The flesh of the frog is boiled with the 252 skin and bones, pounded to a paste in wooden vessels, and then eaten. Among the insects, grasshoppers and termites are used for 222 food. Both are roasted. In the brief time that they are winged, the termites are lured in such great numbers to a fire maintained for the purpose of catching them that it is an easy matter for the Bushman to collect a rich booty in a few hours. A special delicacy in the Bushman household is wild honey, which, as I was able to ascertain, is extremely tasty /254/ and is to be found in quantity on the Omuramba omatako as well as in the Kaukau Veld.

825 The bullfrog is called ntchei by the Bushmen (Herero: otjisume), the termite, /ui (Herero: othohumboli).

The vegetable diet naturally changes with the seasons and is 262 quite varied. I shall attempt to give a brief survey, though at 824 the same time I am aware that it can lay no claim to completeness.

1. The chamắ or taba (Herero: omatanga). These are the roasted kernels of the Kaffir pumpkin [melon?], widely known here, which produce quite a tasty dish.

2. The //ŭni (Herero: omarunga); this is the Heikum Bushman name for the palm tree that is common in this region. The edible parts of the tree are the apple-sized fruit, whose skin has a sweetish taste reminiscent of St. John's bread, and the soft interior of the trunk. The latter is a whitish, soft, fibrous pulp, which the Bush- [252] men prepare by cooking and pounding.

3. A species of white mushroom called naŭ by the Bushmen, majova by the Herero. The mushroom grows during the rainy season especially along the edges of termite hills; the diameter of its cap reaches about 20 centimeters. It is eaten raw as well as [252] boiled. I do not know whether it is true that excessive eating of this mushroom has a detrimental effect on mental activity, as the Herero aver – ejova, plural majova, is the Herero word for stupid.

4. The unki, a well-known species of onion, about the size of a hazel nut, called //au by the Bushmen, is very common and forms an important part of the kitchen provisions, not only among the Bushmen, but also among the Herero.

[252] 5. The //guitcha of the Bushmen, ussessenga of the Herero,

X137 ***Terfezia* spp. (5031, 5616) Photograph 1.**

Naron Bushman......	**,ku_ts'i**
Eastern !khũ Bushman	**,tsu_ts'ɔ**

In size, shape and colour these truffles resemble potatoes, but the skin is rough and they are not as heavy.

The genus Terfezia, which is allied to the European truffles, has been recorded from dry and sandy localities between the northern Cape Province and the Mediterranean region. There are 36 species, of which three are believed to occur in South West Africa and the Union. Some records are vague and incomplete, and cannot be checked. These southern species, all of which are edible, are not distinguishable except by microscopical examination. They may be found from April onwards to about July, when the season ends presumably through their disintergrating in the soil. Their presence depends upon the rainfall, as is shown by the following extract from a letter from Mr. G. Scholtz, of Ghanzi, whom I had asked to collect some for me. "Nature appears to be against you this year. I even offered five shillings per truffle, but according to the Bushmen (my offer was just laughed at) no rain, no truffles. And we certainly have had no rain, in fact the worst drought in Ghanzi's history."

It is uncertain whether they are root parasites or mycorrhizal fungi, and nothing definite is known as to the host plant favoured by any particular species. In the south-western Kalahari, near the Kalahari Gemsbok National Park, they are found in the dips between the sand dunes where *Aristida ciliata* is the dominant grass, but it has not yet been established whether they are connected with it or with some associated plant. Towards the Ghanzi area they were collected in a mixed grassveld of Aristida and Eragrostis species with scattered trees of *Acacia uncinata* and no *Aristida ciliata;* but here another species may have been involved.

222 The European truffles are usually collected with the aid of dogs or pigs, which can trace them by their scent, and rarely by two other methods. One of these is by observing where certain insects collect to lay their eggs, for their larvae feed on truffles and the eggs are laid near them. The other is to watch for cracks in the ground which the truffle sometimes causes as it grows. This is the method used in southern Africa. A good deal of practice is needed before it can be applied, for the cracks are slight, and are specially difficult to find where the surface has been disturbed by game or stock, or where they have been partly filled in by windblown sand, but matters are eased somewhat by the fact that there is seldom more than about three inches of sand covering the truffles and that they grow in patches.

252
262 They may be eaten boiled or roasted. The texture is like soft cheese. They are not aromatic and the flavour is far inferior to that of the best European truffles.

***Ophioglossum sarcophyllum* Desv. (5142) Photograph 2.**

X137 This unusual looking plant is one of the ferns. It is five inches high on the average, and somewhat fleshy, and consists of an erect stalk with a leaf-like undivided frond at the top. A thinner stalk which bears the spores rises from the mid-rib near the base of this frond.

X137 year. They produce an erect and robust plant with bright green leaves and numerous spreading underground rhizomes on which more bulbs are borne a few inches below the surface. Some stolons are produced above ground as well, from among the leaves. They afterwards turn downwards, entering the soil close to the parent plant and thereafter behaving in all respects like the rhizomes. The flowering stalk is three-angled and unjointed, with a cluster of compact, spiky inflorescences at the top, some on slender secondary stalks and some almost sessile. The parent plant is in a sense annual, for both it and the bulb producing it wither at the onset of winter, but the fresh bulbs which have been produced form new plants, and the species is capable of spreading very rapidly by this means. The bulbs are rounded, half an inch in diameter with a sharp point at the top, and covered with several papery brown layers which may be removed to expose a pale nut-like body.

Sedges usually favour damp places, but this species seemed equally at home in seepy areas and well-drained ones, and in the sandy country near Nama Pan it was common nearly everywhere, sometimes scattered among the grasses but more often in patches. Its range is from Cape Town to the Mediterranean, and it occurs in Australia also.

262 The bulbs are edible, and seemed to be a fairly important food of
the northern Bushmen. The taste is sweetish and they have a crisp tex-
252 ture and a cloudy, very slightly astringent juice. Light roasting improves
● 222 the flavour. They are easily gathered by scratching away the top layer of soil, and their presence is often shown by the disturbed soil where they grow, for they are a favourite food with many birds and small animals, which scratch and burrow to find them. According to the *Flora Capensis* the plant "has been for nearly a century cultivated in Europe".

X137 *Hyphaene ventricosa* Kirk (5301).

Eastern !khũ Bushman !hani and !hɛni

This palm is bushy when young, but loses its bushy habit as it matures, forming a long clean stem 40 feet in height with a crown of leaves at the top and often with a slight swelling near the middle. The leaf has a strong woody rhachis up to six feet long, slightly hollowed above and rounded below, with a row of sharp hooked spines at intervals of an inch or so along each margin. At its tip it bears the leafy part which is two feet across and folded like a fan. The fruits, a little smaller than a tennis-ball, are covered with a glossy brown papery skin, and are borne in clusters.

Old an half-decayed fruits were found in the neighbourhood of Nama Pan, presumably where they had been discarded by Bushmen, but the palm trees themselves were not seen in this area. Only one specimen was found, 20 miles to the north-east. It was immature and had neither flowers nor fruits. According to available records, it was growing near the southern limit of its range, which extends to northern Rhodesia and the Belgian Congo.

262
114 There is a quarter-inch edible mealy layer immediately underlying the
skin of the fruit. It is fibrous and dry but sweetish, with a pleasant
flavour, and may be gnawed off the hard inner shell into which it merges.
[272] The kernel in the centre of the mature fruit is hard and bony and inedible,
[252] but Chapman (1868: II: 73) states that the milk of the young fruit may be
used like that of the coconut, and that the whole of the young fruit may "
BE EATEN AFTER BOILING, "PULP, RIND, AND ALL."

X137 place being taken by a few thick fleshy erect lobes, and from the woody remnants of old flowers in this particular species it could be seen that they had four lobes. The two species recorded from South West Africa are *Hydnora africana* and *Hydnora solmsiana*, parasitic respectively on species of Euphorbia and species of Acacia. Number 5162 is either a new species, or one of the known ones parasitic on a hitherto unrecorded host. The material collected was inadequate for specific determination, and the seeds which were planted did not germinate.

This Hydnora was seen only in the immediate neighbourhood of Nama Pan, where it appeared to be fairly frequent.

The host plant is a straggly shrub up to six feet high, with grayish woolly leaves an inch long. It has the characteristic four-winged fruits of the genus, and many remain on the twigs through the winter. It was not seen in the country to the south of Ghanzi, but was common from Ghanzi northwards, and is widely distributed in Portuguese East Africa, the Transvaal and Rhodesia. A glossy-leafed form of it is also known, but was not seen along the route of the expedition.

[262] The whole mass inside the Hydnora fruit is edible. It is astringent
and slightly sweet, and is eaten raw. The fruits would be difficult to
find if it were not that they are eaten by various animals. A litter of
[222 half-eaten fruits and fragments of rind and shallow burrowings often
824] show where the fruits have been excavated, and where more may be
expected. They ripen about the end of August.

Talinum arnotii Hook. f. (5256) Photograph 14.

Eastern !khû Bushman ˌǁgwi_ja (stems and leaves)
≠k″arɔ (tuber)

During the winter there is seldom any sign of this plant above ground for the branches wither and die back with the first frosts. There is a perennial tuber a few inches underground, irregularly shaped and up to a pound in weight, crisp in texture and exuding a little cloudy astringent juice when injured. It has a brown skin and a reddish-brown zoned flesh. Although it is often eaten into hollows, presumably by rodents and insects, it is not eaten by the Bushmen. The stems appear in September and form a loose mat three feet in diameter on the surface of the ground. They are reddish-brown, prostrate and sappy, and the leaves are dull green and fleshy, channelled down the centre on the upper surface and with slightly crystalline appearance. The bright yellow flowers, which are produced in midsummer, are an inch across and quite showy, but open only in the heat of the day. They have two sepals and five petals. The flower-stalk starts bending when the flowers are mature, and by the time the fruits are fully formed it is curved sharply back. The fruits are the size of a small pea, shiny green and pointed at the tip, and covered by the withered remains of the perianth. They become yellow when ripe, with a papery shell and seeds the size of a pinhead.

The tubers of this plant were often unearthed in the more open parts round Nama Pan. I am doubtful whether it should be kept separate from *Talinum caffrum*, which is distributed from the Cape Province northwards to the Sudan and is very variable in its leaves and habit.

[262] The leaves and smaller branches of this species are used by the
[252] Bushmen as a green vegetable. They are usually prepared by being
pounded in a mortar to a paste which is dark green and slightly slimy and
has a faintly acid taste with a flavour of lettuce.

262 252 [222] The sappy young tuber makes a good vegetable after baking or boiling. Those dug up by the Bushmen were about two pounds in weight and would not have been more than a few seasons old, for it is known from specimens grown from seed in Pretoria that it takes about ten years for them to reach 30 pounds. Burchell (1824: 589) says that they are astringent, but on tasting the 30-pound one mentioned I did not find it so. It was, however, rather tough and leathery.

With breeding, this might become a useful plant of cultivation.

X137 *Bauhinia macrantha* Oliv. (4887) Photograph 21.

!hõ: Bushman.......	ǀintɛ
‖ganakwe Bushman...	n|an|hɛ
ǀgikwe Bushman......	n≠an≠ɛ
Naron Bushman......	n≠i≠ei
Eastern !khũ Bushman	≠ŋ≠wa

This species is usually a rigid three-foot shrub, but grows up to six feet where protected from fire and is sometimes found as a weak scrambler with stems up to 12 feet in length. Dinter (1912; 28) records one in the form of a tree five metres high, but this is quite exceptional. It has thin rather wiry twigs, some slightly curled at the tips, and alternate bilobed leaves which are shed during the winter. The younger parts are minutely hairy, but soon become glabrous. The flowers are borne at the tips of the twigs and are pure white and showy, with a pleasant scent and crisped petals. The pods are four inches long and one inch broad and contain five or six irregularly-shaped flattened beans.

Bauhinia macrantha has been recorded from near Molepolole, but is probably localised or uncommon there, for on the expedition it was first seen 60 miles northwest of Molepolole. From there on it was common, although there were occasional gaps in its distribution. It forms communities in open sandy grassy country, usually with the tips of the bushes just showing above the grasses, and has been recorded from the Transvaal, the Bechuanaland Protectorate, South West Africa, Rhodesia and Angola. It has grown well as a cultivated ornamental shrub as far south as Grahamstown.

252 262 The ripe beans are extracted from the pods, roasted peeled and pounded into a pleasant-tasting coarse rather gritty meal, edible without further preparation. The beans may also be used when they are green, but then it is more convenient to roast the whole pod so that it can more easily be opened. They are not eaten raw, for unless cooked they have a burning taste. The pods are easily opened when mature by bending them across the middle, when the two halves spring apart. The halves form spirals as they dry.

The importance of this species as a food plant was shown by the heaps of empty pods which were found at many Bushman shelters and Bakalahari villages. There is, however, a great deal of labour involved in preparing the meal, because although the beans have a thin shell and are thus easy to crack, it still takes about 1,500 of them to produce a pound of air-dry meal.

A note on one of Schoenfelder's specimens in the National Herbarium states that the root is also edible when roasted.

Like *Bauhinia esculenta*, this might be a useful cultivated plant if improved by breeding.

was the host of the insect which they use for making their arrow poison. 824
and that it had harder roots than the other. The fruits, flowers and leaves might have shown the difference clearly, but no trace of them could be found, and though plants were sent to the Transvaal for growing they failed to become established.

In spite of its unpromising appearance, the non-poisonous one is a 312
useful source of water. This is in a sappy unbranched vertical underground 824
part about an inch and a half thick. The Bushmen excavate down its [222]
length as deeply as they can reach, then break it off and withdraw it.
They remove the thin outer skin and chew the remaining part, which is [271]
crisp and has a little tasteless sap. As a source of water it does not compare with the various species of Cucurbitaceae—weight for weight it contains far less, and the labour of digging it up is considerable. However, it must be a reliable standby when the Cucurbitaceae are not in fruit, and in the central Kalahari it is plentiful. In the southern part it is apparently absent, for it was not seen until 256 miles north-west of Molepolole.

Dichapetalum cymosum (Hook.) Engl. 5109, 5266, 5338 Photograph 24. 137X
Eastern !khũ Bushman ma-˥

This plant produces a number of slender erect woody stems up to 12 inches high, sparingly branched and often buried in the sand at the base. The leaves are four inches long, numerous, sessile, alternate, broader in the upper half where they are about one and a half inches across, and tapering at the base, with a stiff papery texture and with veins prominent above and below. They have a slight bloom on the upper surface and the younger leaves at least have a pair of narrow hairy stipules at the base. The younger parts of the plant are hairy, but the hairs wear off with age, and during the winter the leaves turn brown and hard and finally drop. The flowers are scented and have white petals forked at the end, but as they are small and nearly covered by the sepals, they are not conspicuous. The fruits are like a loquat, and may be brown or yellow. The have one or two big seeds covered by a little flesh.

Dichapetalum is distributed widely but patchily from the northern Transvaal through to Angola and Rhodesia. On the expedition it was seen for the first time between Tsau and Kaikai, and beyond that it was fairly frequent but scattered. It was usually in open situations, and seldom where there was dense tree growth.

Though the leaves are extremely poisonous, the flesh of the fruits 262
is harmless and is eaten by the Bushmen. They emphasised that the flesh only could be used, and that the stone was poisonous. They did not mention the skin, but the following note on Schoenfelder's specimen 31, in the National Herbarium, indicates that it, too, is poisonous:—

> "Fruits like small yellow oranges are eaten peeled in great
> quantities by the Kung Bushmen. When still green can be eaten [252]
> after baking in hot ash. Used like fruit, fresh. The peel of the [278
> fruit is stamped and mixed with other food to poison stealing dogs 824]
> (Diriko)."

Marloth (1913-25: II: I: 120) and Engler (1912: 577) also refer to the edibility of the fruits.

There are four other plants of very similar appearance which could 137X
be confused with *Dichapetalum cymosum*, and although they were not collected on the expedition, their distribution does overlap. They are *Pachystigma pygmaeum*, *Pygmaeothamnus zeyheri*, *Parinari capense* and *Diospyros chamaethamnus*. The first two bear inedible fruits and may be

524 thing. This they do one by one, each in turn beckoning to the others to come and see.

In the *surus-/hurub* (game of the ringhals snake) one woman acts as the snake, standing with her hand and forearm raised above the forehead. As the other women approach her she hisses and strikes with the raised hand after the manner of a snake, causing them to scream and retire. This game is said to be founded on the experience of a woman into whose eyes a snake spat while she was trying to drive mice out of a shrub by means of her stick.

The following are a few examples of the games played by the *‡Ao-//ein* and *//Aikwe* of the Kalahari, viz.: *Children's*:
[857] a man bartering goods from a trader; cock ostriches fighting with elephants which have come to drink at waterhole; a fight between two opposing groups, small bows and wooden arrows being used; a python lying in wait for and capturing its prey at a waterhole. *Men's*, the ostrich game; throwing the *isani*, in which a thin, short-feathered stick, weighted at one end by means of a large bean (bauhinea esculenta), is flung into the air and kept going by catching it on a stick in its descent and flinging it up again; throwing the stick, in which each player has a thin stick, about three feet long, which he flings forcibly on to the ground in such manner as to make it rise into the air and shoot away from him. *Women's*, catching the ball in which a melon or round tuber is used for the purpose; the capture of brides by young men, etc.

ECONOMIC CONDITIONS.

Food Supply, Etc.

137 The source of the food supply varies very considerably in
184 different localities. In some it is derived mainly from the
268 vegetable, in others from the animal, kingdom. The Kalahari and northern parts of the territory are rich in both plant and animal life and the Bushmen inhabiting those parts consequently have a fairly well-balanced dietary. In the central and southern Kalahari the most important among the vegetable foods are the *tsamma* (citrullus vulgaris), öintjes (cyperis edulis Dtr.) and *//nōun* (Bauhinea esculenta). As one proceeds northwards various fruit-bearing trees appear, *e.g.*, the wild fig, palm, omungete nut, wild orange, omuandi, omuve, etc. In addition to the above numerous varieties of edible roots, bulbs, tubers, berries, etc., appear in great profusion during and after the rainy season.

● 222 Among the *Hei-//om* the following ceremony is observed in connection with the collection of veldkos by the women. It is practised when the fruit of the *‡huin* ripens, generally after the onset of the big rainy season in the month of February. On a certain day, appointed by the *gei-khoib*, all the women, under the guidance of the *gei-khois*, set out to collect the first fruit of the *‡huin*, the men in the meantime remaining in the *//gāus*. The trees from which the fruit is to be gathered are indicated by the *gei-khois*. On the return of the women 222 to the *//gãus* they deposit the bags containing the fruit in front of the hut of the *gei-khoib*. The *gei-khois* then fills four or five basins by taking a little from the bag of each woman and places them under the *!heis*. Her husband now kindles the *!hei/ais* and, after having applied *‡norab* and *dabas* to appease the fire for a plentiful harvest, takes a handful or two of the fruit and eats it. The fruit is now free and both men and women may eat it. There is no name for this ceremony, but the first fruit is called *!gao-ei-/un*.

Among insects, locusts, ants, scorpions, young bees and 262 honey are greatly relished. Frogs, lizards, snakes, etc., are also eaten. In fact, all living animals are eaten with the exception of the mole and the hyena, the former because its winter larder of öintjes forms a valuable and easily obtainable addition to the supplies of the Bushmen and the latter because it eats human corpses.

The methods used in the pursuit of game vary according 221 to the season, the year being divided into a cold, dry season 224 (winter), a hot, dry season (spring and early summer), a small, rainy season (September and October) and a big, rainy season (January to April). Snaring is resorted to only during the dry season in the case of such animals as guineafowl, bustard, aardvark, ostrich and small game. Pitfalls are not made use of except for hare and springhare as too much work is entailed in making them. Springhare and snakes are also caught by means of a long barbed stick which is passed into the burrows, the animal being transfixed and then dug out. During the big rainy season when the ground is sodden with moisture small buck such as duiker and steenbuck are run down on foot and killed with a knob kirri. This method is not applicable to small game during the dry season owing to the difficulty in following the spoor. In the hot weather, however, young buck are easily caught in this manner as the hot sand causes the hoofs to come off. The gemsbuck does not tire easily. It is run down, therefore, only during the big rainy season when the soft ground impedes its progress and causes it to be caught comparatively easily. All other varieties of big game are run down in the hot, dry season. After a herd of game has been located one or more men give chase at a steady trot. The animal is pursued relentlessly until it is exhausted and brought at bay, when it is killed with assegaai.

Bow and poisoned arrows are used all the year round. These 184 weapons differ considerably in character in various localities. 411 The Kalahari bow is small compared with that used by the *!Kung* of the Oschimpoloveld, and *Hei-//om* of the Etosha Pan region; the arrow consists of a reed shaft, bone foreshaft and bone or iron tip, whereas the latter use arrows with feathered wooden shafts and iron tips only. The poison also 184 varies in different localities. In southern Namaqualand it 278 is constituted of a mixture of plant juice (euphorbia), snake poison, scorpions and spiders; in the southern and central

The Bushmen are one of the most primitive peoples living 105
on earth. Although most of their groups own some metal objects, Bushmen do not smelt or forge metal, but get it in trade [325
from their Bantu neighbors. They use soft metal in the making 439]
of a few tools such as knives, arrowheads, and little axes, cold-hammering the metal into shape themselves. Bushmen make the other tools they use from wood and bone, grass and fiber, the things of the veld. They dig roots and pick berries [222]
to eat because they have no crops. The desert is too dry for anything but desert plants to grow naturally, and Bushmen, who quickly consume all the wild food available in one place, cannot stay anywhere long enough to tend crops or wait for them to grow.

There is not enough water to water livestock, and for this [231]
reason Bushmen have no domestic animals. Most of their groups do not even have dogs. Instead of herding, Bushmen hunt wild antelope with tiny arrows, sometimes made of soft, [224+
traded metal, sometimes made of bone, and poisoned with a 278]
terrible poison extracted from a certain grub, a poison which affects the nervous system of a creature and which is so deadly that an antelope shot early in the morning with a single arrow well placed in the body dies within the day. Hunting is very difficult, for travel in the veld is thirsty and rigorous and the antelope are clever, but as often as not the Bushmen hunters shoot one and then they use it all. Most of the meat is dried [251]
to preserve it, causing it to last at least a few weeks, but sooner or later every last bite of it is eaten, even the mucous lining of the nostrils and the gristle inside the ears. They [262]
sometimes eat the hide, sometimes work it into leather to use for clothing, and if the antelope bones are not all [281]
cracked for the marrow, pieces are worked into arrow points to shoot another antelope.

In order to live as they do, Bushmen must travel through 105 361

also because, made of cloth instead of leather, it is more clinging, 648
therefore warmer and more comfortable, and dries faster 291
when wet. It is sought after and desired, it is got through employment; 439
yet, even so, Bushmen hesitate to seek employment
because they believe that they will be badly treated (as
they sometimes are) and they often find the customary wage
and food ration to be inadequate for anyone who must support
a family. Supposedly, the wives of Bushmen laborers are [222
free to look on the farmer's land for roots and berries, as they 465]
would if they were living in the veld; but, as it happens, after
a few years the supply of wild food around a farm becomes
exhausted.

The Bantu farmers, being as a rule much poorer than the 648
European farmers, are less generous to their Bushman serfs. 464
They also give a food ration of cornmeal and milk but almost
never meat, for any meat that may come into the Bantu
kraal is eaten by the Bantus unless it is the carcass of a hyena
or a leopard which the Bantu masters have killed for the pelt.
The Bantus say: "Our Bushman servants are like our children;
they herd our cattle for us and we feed them. A child
does not ask for wages when he helps with the family work."

Besides this, the Bantus badly cheat the Bushmen who
come in from the veld to trade cured antelope hides for metal
and tobacco, sometimes asking several hides, worth several
pounds apiece, for enough tobacco to fill the palm of the
Bushman's hand, or for a piece of wire long enough to make
an arrowhead. All in all, it does not benefit the Bushmen to 609
live anywhere near Bantu or European settlements, and that 648
is why the Bushmen of the veld run and hide when they see
Europeans coming, believing that they may be taken by force
(as they sometimes are), and why they avoid going to a
Bantu settlement except to trade for tobacco when they feel

is a painful procedure. The cuts are made on the thighs and 304
forehead with a knife or ax blade, then charcoal is rubbed in,
but the woman told us later that in her case it had been worth
the pain and trouble because, she said, she was extremely
ugly and had been made more beautiful.

Her baby's name was Nhwakwe, she told me, and after 551 276
that we were at a loss for conversation. I offered her a cigarette, [609]
which she declined, indicating that it made her cough.
I was surprised, for she was the only Bushman I had ever
met, man, woman, or child, who did not smoke.

Presently she smiled, pressed her hand to her chest, and 551
said: "Tsetchwe." It was her name. 609

"Elizabeth," I said, pointing to myself.

"Nisabe," she answered, pronouncing after me and inclining her head graciously. She looked me over carefully without really staring, which to Bushmen is rude. Then, having surely suspected that I was a woman, she put her hand on my breast gravely, and, finding that I was, she gravely touched her own breast. Many Bushmen do this; to them all Europeans look the same.

"*Tsau si*" (women), she said.

Then after a moment's pause, Tsetchwe began to teach me 609
a few words, the names of a few objects around us, grass, 222
rock, bean shell, so that we could have a conversation later.
As she talked she took a handful of the beans out of her
kaross, broke them open, and began to eat them. This is a [137]
wonderful, bitter bean, shaped like a lima bean, which grows
on tiny bushes in patches throughout the Kalahari. When you [261]
eat these beans they burn your tongue, throat, and stomach,
but they take away hunger and thirst. Besides the beans in
her kaross, Tsetchwe, who began unloading, brought out a
large, edible root which she had dug up—she must have been
gathering food before we came—and put it in the shade of a

609 bush beside her fireplace. Also, she brought out six round
222 green melons which are called *tsama* melons, and which,
during the autumn, provide the only liquid available for all
the Bushmen in the desert, and for all the game antelope
[271 besides. Under the green rind a tsama is very like a watermelon,
312] filled with small oval seeds and very watery in texture, but is
itself pale green and smaller, the size of a small cantaloupe.
[516] Tsetchwe placed one between her feet and, gripping it firmly
with her strong toes, chopped a hole in the top of it with her
digging-stick; then, lifting the cap away like the lid of a
271 jack-o'-lantern, she mashed the pulp inside until it was liquid. She
put the melon to her mouth and, tipping her head back,
drank from it, using her long digging-stick to help push the
pulp into her mouth, working it like an enormous chopstick,
making a watery noise as she sucked. When Tsetchwe had
collected a mouthful of seeds she put the melon down, took
an old, dry tsama melon rind from her kaross, and spat the
seeds into it to save them, for they can be roasted and eaten
like nuts when they are dry. Tsetchwe drank all the liquid in
[264] the rind and seemed refreshed as she cast the empty rind
over her shoulder and brushed off her mouth and hands.

609 At last Gai strode back into the werf, followed at a distance
621 by a group of three small boys and, much farther, by three old
women who stood waist-deep in bushes, close together like
three antelope, craning their necks to see us.

609 When they noticed Tsetchwe and Ukwane, they came
276 forward with more confidence, accepted tobacco, and, squatting
621 immediately, began to smoke. It had been months, Ukwane
said, since they had used their last tobacco, had been reduced
to smoking leaves, and they were very happy to have the
tobacco we had give them. Bushmen love to smoke. They say
[261] that tobacco, as well as the wild beans, takes away hunger
and thirst, and, besides that, it makes their hearts glad. One

574
[481] walk in single file, and they seemed very small, naked, and far away under the burned, pure sky, moving toward some remote destination where they hoped to find a man who had been walking away from them for almost a month, perhaps at some nameless little pan lost somewhere in the countryside, perhaps in a nameless bend of the omaramba. As they walked they zigzagged, avoiding small obstacles such as stones or thorn bushes, very incongruous with the enormity of the sky and the plains. The bow on Gai's shoulder made a bold upward curve.

A tree appeared on the horizon, and they veered toward it. When they reached it they sat in its shade, two shadows in the yellow grass, and a puff of smoke rose as they lit their pipes. We caught up to them and found Gai digging for a
[222] *torabe* vegetable. He reached into the hole he had made and dragged it from its roots, brushed the dirt away, and chopped it into six pieces, giving one to each of us. We ate that for lunch. It was bitter and moist, firm as an apple and pleasant because it was wet. As we sat there we noticed the smoke of three veld fires which had suddenly risen, perhaps stirred by the wind far away, two small ones in the north and east, one large one in the south, its smoke reaching up to the sky first in little tendrils, then billowing in great clouds like the clouds in the sky but browner.

Gai and Witabe stood up, brushing sand from their legs, and walked into the sunlight again, turning toward the larger
[201] fire. Bushmen often set the veld alight to signal to each other, but they do not send messages; a fire simply shows other people where they are, and even this is vague, as fires are sometimes set by natural causes.

137 After traveling several hours over the plains, we came to a little forest in a valley. A fire had been through there and had burned all the yellow grass from the ground, leaving black

ing great carcasses of fallen trees, some with the leaves on the 731
top still green, that were filling the air with the smell of their
wood burning. The ground was still warm to walk on, but all
the bushes, all the little succulents, all the vines that marked
the water roots were gone; no snake or lizard or animal was
there, all were burned or had gone; we saw only animal tracks
half filled with ashes, and a few birds come to eat dead insects.
We saw a pair of secretary birds and later a pair of [136]
paouw, huge gray birds that walk more than they fly, wandering
through the ruins looking for dead reptiles.

As we walked, fine black powder rose to dust our legs, and
now and then, off through the standing tree trunks and between
the fallen trees' great upflung roots, little whirlwinds
crossed back and forth, raising the dust in spiraled pillars. [821-
Bushmen say that whirlwinds show the presence of the spirits -775]
of the dead.

Witabe's eyes searched over the ground, and when he saw 222
a small mound of earth he walked up to it and punctured it 262
with his toe. Out rushed a horde of ants, which had been safe
in their tunnels when the fire passed and now began at once
to repair their damaged mound. Witabe crouched among
them and began to pick and eat them, selecting the soldier
ants, ones with large heads and heavy jaws. He bit off the abdomens,
tossing the heads away. Presently he offered some to
us, as I had feared he would; as everyone else ate one, I did
also, and found that it was not too unpleasant but sour and
very watery, very like a blackberry before it is ripe. The workers,
I am told, are tasteless, but the fighters are considered a
near-delicacy; mine opened her jaws wide to fight my thumb
before I ate her.

Later in the day, when the sun in the sky, the still burning 481
trees, and the fire-warmed sand made the air on the flats unbearably 487
hot, we turned back to camp for the shade of our

and leafy green vegetables that taste like rhubarb, have not 132 271
grown in yet; and so the Bushmen must go thirsty. People 137
have died of thirst in these false seasons.

Gathering veld food is the work of the Bushman women, 222
and I used to go with them quite often on their trips. We [462]
sometimes stayed in the veld all day eating roots instead of drinking water. One day my brother came along to film the gathering of veld food, and as we were getting ready to leave, Gai also joined us. It is customary for Bushmen never to let a
group of their women go anywhere with a Bantu or a European man unless a Bushman man goes with them to protect [609]
them. Gai sauntered along behind us in his role of guardian, quite unhampered, as he had nothing with him but his loincloth. Dasina, Twikwe, and Tsetchwe walked in front, each with a digging-stick thrust in her belt like an enormous knife, each wearing a heavy cape, and Tsetchwe carrying her baby, who rode, carefree and swinging his feet, on her shoulder. John and I walked in the middle of the procession, and at the end came the three young boys, who did not stay in single file but ran all over the veld, ran circles around us, and shouted to each other happily.

We walked across the pan of Ai a ha'o through the fine, [137]
soft grass, which left tiny, barbed seeds sticking to our legs. We walked through the brush on the opposite side and then over a wide plain, where we saw a herd of wildebeest. No one was armed, and when the wildebeest saw us, put down their heads, and ran, we could only watch helplessly as all that meat galloped away.

We walked until we came to a patch of tsama melons, perhaps twenty of them lying together, shiny, smooth, and green in the grass. The vine that once had nourished them had dried away and already some of the melons were turning yellow, overripe, ready to open and release their seeds.

222 The women stopped and began to gather up the green melons, Twikwe picking them with a mechanical, stereotyped gesture. She first slipped her hand under a melon; then, twisting her elbow, she lifted the melon and held it pinched between the heel of her hand and her forearm, and with a scoop slipped it into the pocket of her kaross on the side. In a moment the side of her kaross was full, and she stood erect for an instant, looked at the sky, shifted her weight, and suddenly the melons rolled to the back of her kaross, leaving the side free for more. She was very efficient. In a moment she had a load. I was a little surprised at her, however, for now she would have to carry the melons with her all day whereas she might have gathered them on the way home. But Bushman women do not seem to mind this.

The women left behind the yellow melons which would have been bitter and rotten, touching them disappointedly with their toes instead. The false spring was hastening the time when all the melons would be gone, forcing the Bush-
222 men to eat roots as a staple diet, not as desirable because of
824 the uses that tsama melons have. Melons are eaten as both
[252] food and water, their pulp is added to meat which needs liq-
uid for boiling, their seeds are roasted and eaten or ground
into powder and used as flour, their rinds serve as mixing-
[415] bowls, as containers for small, loose objects, as cooking-pots
with or without the pulp inside, as urine-containers for curing
hides, as targets for the children's shooting practice, as children's drums, as resonators for musical instruments, and all this amounts to a serious loss for Bushmen when the melons rot or dry.

222 We went on until we were about two miles from camp. We were going to an almost imperceptible small hill, a place, said Twikwe, where a great deal of veld food grew. On the way a moving shadow caught our attention, and we looked up

On the way a moving shadow caught our attention, and we looked up 222
to see a white-breasted, black-winged vulture sailing not far 136
above our heads, not stirring himself but riding the drafts
and currents of the air. He was looking at us with hard eyes,
his red face turned to look down, and suddenly he closed his
great wings under his body, sweeping them down so far that
the long wing feathers brushed together four feet under his
belly. Then his wings swept up again and bore him on. I had
never seen a vulture do that before. He did it only once, then
made a circle all around us, looking down at us, his eyes cool
in their red wrinkles; he rose higher and higher and soon he
was gone. All over Africa the sky is full of vultures, but so
high that you can seldom see them; any time you look up
with binoculars, however, you will probably be able to see
one sailing, waiting up there for a disaster.

We were going particularly to look for *bi*, a fibrous, watery 222
root that is the mainstay of the Bushmen's diet during the 136
hot season when the melons are gone. From the end of August, 262
when the spring begins, the heat increases in intensity
until December and January, when the rains come, relieving
the drought. During this hot, dry season the sand reflects the
sun until the air all over the veld shudders and dances, until
human beings and animals alike gasp for air and water. This
is the hardest season of all for the Bushmen, yet most of
them remain alive by going into the veld early in the morning
in the cooler light of dawn to gather bi. The bi they find is 222
brought back to the werf before the sun is hot; it is scraped, 271
and the scrapings are squeezed dry. The people drink the 137
juice they squeeze. Then they dig shallow pits like graves for
themselves in the shade. They urinate on the bi scrapings and
line the pits with the now moist pulp, then lie in the pits and
spend the day letting the moisture evaporating from the urine
preserve the moisture in their bodies. They lie still all day and 222
at dusk go into the veld again to gather food, perhaps a few

9: Thomas T-5 (1951-1955)1959

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222 roots or cucumbers, returning to their werf before it is utterly dark, for in the hot season the big snakes, too, move only at night, the mambas and the cobras out of their holes.

By the end of the season the Gikwe are emaciated from hunger and thirst, and it is because of this season that the Gikwe hear the jackals on the plains cry "Water, water."

222 137 When we reached the little hill Twikwe had mentioned we found no bi root, but we found other kinds of veld food: a bush with red berries, several kinds of roots, and a spiny cucumber not three inches long, round and bristling with its spines like a sea urchin, handsome in its light-brown, yellow-striped skin. The young boys found five of these cucumbers lying in a crooked row on the sand, all put there by a vine which had mostly dried and shriveled away. We picked them and ate them. They have a watery green flesh which looks just like the flesh of a cucumber as we know it but which is sweet.

Witabe, noting the direction of the vine by the way it had deposited its cucumbers, traced it to its source and found a bit of it left above the ground, below the branches of a white-thorn bush. He said there would be an edible root there, and when he dug, there was.

Meanwhile, Gai had found a solid, stiff vine like a stalk among the roots of a gray bush which was the home of a small flock of birds. Just for fun, Gai chased the birds out; they would have gone anyway, but, frightened by him, they flew like little pellets in every direction, leaving behind a pale, soft grass nest blowing in the wind. Gai sat down facing the bush with the branch shadows all over him and dug with a digging-stick in the sand between his legs. The branches around his head got in his way, tickling his ears, causing him to slash impatiently at them with his digging-stick, and when

this did no good he endured the nuisance for a moment, then 222
137
flung himself down on his back, put up his long legs like a fighting cock, and kicked the branches down.

He dug out a great deal of earth, throwing it behind him, and finally uncovered a *ga* root, big and dark with a warty surface all covered with lumps like a toad or a stone; a fascinating thing, for although it was large and nondescript, brownish gray in brown-gray sand, marked only by an old dry vine, it was life itself to Bushmen, bitter but quite moist even in the hottest season. Tsetchwe put the root in her kaross and we went off, Gai generously carrying the baby, taking him from Tsetchwe by the forearm and swinging him up to his shoul- [854]
der. The baby rode astride Gai's neck with the soft kaross he wore draped over Gai's head. From the rear they were an apparition, as this made the baby's head, not much higher than Gai's, look like a tiny head on a man's tall, slender body.

We wanted very much to find a bi root, and while Gai, the baby, and my brother went off to look for one I waited behind with the women. We rested in a small circle in the dim shade of the grass, which, when we were sitting, came high above our heads so that all we could see was a circle of sky and, in the circle, the ragged, waxing moon. It had risen luxuriously in the daytime and was a pale, large crescent, [821]
pearl-colored in the sun. The moon is a root with a climbing stalk, a vine. It can be eaten.

Giamakwe began to urinate right in our midst, crouching 514
and pulling his loincloth aside. Although the adults are slightly inhibited about this, the children are not, sometimes simply turning aside to urinate as one might turn aside to cough. Presently the young boys got up and ran away, and when they did Tsetchwe herself got to her feet, stepped aside, and urinated also, standing up but leaning forward. Bushman

514 women sometimes do this, but Bushman men crouch to urinate. "It is our law," they say.

264 222 While the women rested they had refreshed themselves with one of Twikwe's melons which Twikwe chopped for them by holding the melon between the soles of both feet and mashing its pulp with her digging-stick, which she held in both hands. Then they got up from their grass nest, sharpened their digging-sticks with Twikwe's knife, and set out to begin the search for food. They each chose a different direction and soon they were out of sight. I followed Twikwe to see 222 481 what she would find, hurrying to keep up as she trampled ahead of me on those spindly, awkward legs of hers, which she kicked out with each step in a walk like the walk of a clown. She kept her back straight, for it was still early and the load in her kaross was light.

222 As I could not speak many words of Gikwe, she didn't even try to talk, but paused from time to time instead to show me things. Once she crouched among the branches of a thorn bush and beckoned to me to show me a tiny vine winding around the bush's trunk. I nodded. It marked an edible root. She pinched the base of the vine where there was a faint touch of green, then, grasping her digging-stick, began to dig. The ground was quite hard, but she dug rapidly, her slender back curved as she squatted over the hole and the muscles of her thin arms swelling. After a long time she threw down her digging-stick and tugged at something in the bottom of the hole. She sat back, and in her hands was a huge stone, which she heaved aside.

"Look," she said, and I crawled beside her into the bush. She had made a hole three feet deep, a foot across, and at the bottom, dim in shadow, lay an immense gray root wedged securely between two stones. "Ga," she said. She ripped the

GiKwe

severed vine from the bush it clung to and tossed it into the 222
sunlight. "Look," she said again, assuming that I would now recognize a ga vine when I saw one; but although I examined it closely, it still looked like any other vine to me.

Again she bent over the hole, leaning over so far that her [516]
head came between her knees, and grasped the huge root with both hands. She tugged so hard that I heard her joints crack, but the root was wedged and she couldn't move it. She took up her digging-stick again, panting now, and struck the rocks, and the point of her digging-stick splintered.

"Ai," she said, exasperated, sitting back on her heels to [516]
carve a new point with her knife. She bent again, pried at the rocks, pried at the root, but it was useless, she couldn't move it. Then she relaxed, resting for a moment as she rubbed her sore shoulders before she got to her feet and walked away, beckoning with her head for me to follow. We would leave it.

We wandered about haphazardly for a time, looking for a vine, and presently I saw one twisted around some grass blades, binding them together in a tuft. I pointed it out to her, but she smiled and shook her head, turning her hands [201]
palm upward in the gesture for nothing. She meant that it was a useless species of vine, marking nothing below. Later, as we walked along, she laughed. Twikwe was charmed by the mistakes the members of our expedition made, for they were always elementary and, to her, very diverting.

Keeping her eyes on the ground, Twikwe noticed a tiny crack in the sand. She scooped at it with the point of her digging-stick, tipped out a truffle, and picked it up almost without stopping. As we walked on she broke it in half, put half in her kaross, and offered half to me. I ate it. It was light brown and had a delicious, salty flavor. Truffles grow an inch

222 or so below hard-surfaced ground and have no leaf nor stalk nor vine to show where they are, only the tiny crack made by the truffle swelling, which the Bushmen notice.

137 We had crossed a barren stretch of plain where only grass
222 was growing and were in another patch of low bushes where veld food also grew. The great plains of the Kalahari may seem undiversified, but really they are divided into countless little patches, some barren, some fertile, depending probably on the soil. In this veld-food patch Twikwe found another vine tangled in the lower branches of a thorn bush and she crawled in after it and began to dig. The thorns around her head, all smooth and shining white like jewels, were tickling her, but, unlike Gai, she delicately put up just one hand and picked off the very thorns that pricked her.

222 She resumed her digging and after perhaps twenty minutes as she followed down the vine she uncovered another ga root also wedged among stones. This ga was not as large as the other one, nor was it wedged as tightly, and when she grasped it, arched her back, and tugged, clenching her teeth and straining her thin arms, the rocks suddenly gave way and the ga flew loose, sending Twikwe crashing back among the thorns. She wiped the perspiration from her forehead with her thumb before she crawled out of the bush, dragging her root and her digging-stick. I noticed that the root was very wrinkled, as if it had shrunk. Twikwe struck at it with the point of her digging-stick, chipping out a fragment, which she put in her mouth. Then she spat, stood up, and walked away from it. When I, too, tasted it to see what was the matter I found that it was flaccid, dry, and very bitter, quite inedible. I looked inside the bush and saw that its vine had begun to turn a little green.

We went on, and passed a few dry melons on our way, yellow and empty, perhaps bitten by an antelope some time

ago. I kicked at one of them and a gray lizard ran out, straight 222
and fast as an arrow. Then it turned around and ran back in again, having no place else to go.

Soon Twikwe found a third root and, after digging it out and tasting it, found it quite acceptable; putting it in her kaross, she went on to find a fourth. We found old, dry holes where Bushman women had dug out roots seasons ago, a few dry vines with bitter, useless roots below, and three more roots that proved to be edible, as well as two more melons, a few spiny cucumbers, a handful of berries from a tiny bush, and one more truffle. This would feed Twikwe and her two sons for one or two days, or perhaps would be shared with Ukwane and Kutera because Kutera, that day, had not [476]
felt well enough to gather food of her own. Bushmen help each other, each Bushman woman contributing to the support of her own family and perhaps to the well-being of some very old people as well.

When Twikwe considered that she had enough, we turned back to find the others, and presently we came to the plain where we had left them. Twikwe called, and was answered by three or four voices very near by. Then, right in front of us as if from nowhere, the three boys, Tsetchwe, and Dasina appeared standing, having been crouching in the long grass. Twikwe and I joined them, and the Bushmen passed Twikwe's pipe, the short, wide antelope bone stuffed with tobacco. When it was passed to me I puffed it, too, but it was so strong and rank that it made me dizzy.

Soon we heard a wail, a sad crying out in the veld, and it was Gai and John returning with Nhwakwe, who had begun to miss his mother or want to go home. Gai looked cross and walked rapidly with his little burden riding on his shoulder, and even John seemed somewhat annoyed because of the noise and because they had not found a bi root. When they

222 came up to us Gai swung Nhwakwe down, dangling him by the arm as he handed him to Tsetchwe, who took him at once and let him nurse. Bushman babies do not like to go for veld food because the sun is hot, there is nothing to eat except the raw roots, and there is nobody to play with, yet they do not like to be left at home alone either. This is a constant and insoluble problem for Bushman mothers.

After asking Gai more questions and, at his suggestion, roaming from one point to another over the veld in search of a bi, it came to John and me that he did not want to show us where one was growing. We understood this, for the bi roots of the veld are naturally limited and if we took one when the Bushmen did not need it, it would not be there when they did. We assured Gai that we did not want to eat it, only to see its vine, and at last he remembered, he said, where one was, far out in the veld and on the way to Okwa. But we were not discouraged and set off in that direction, and after a while we found it far away but not as far as Gai had said. It took us an hour to reach it, but we had traveled slowly because the women had stopped to gather melons along the way.

When we came to the center of an enormous plain with no tree or bush to mark the place, Gai stopped and, glancing
[201] around for a moment, pointed suddenly with his toe. After trying hard to see, we noticed a tiny shred of a vine wound around a grass blade; no part of the vine still touched the ground, as the vine had dried and parts of it had blown away. Gai had known where the bi was, he told us, because he had walked by it months ago in the last rainy season when the vine was still green, and he had remembered. He had assumed that it was still there because only his own people used the territory around it and if one of them had taken it he would have heard. Bushmen talk all the time about such things. He had had it in his mind to come back and get it

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Ukwane eats a tsama melon, the source of food and all water for Bushmen during the drought.

[p. 112(c)]

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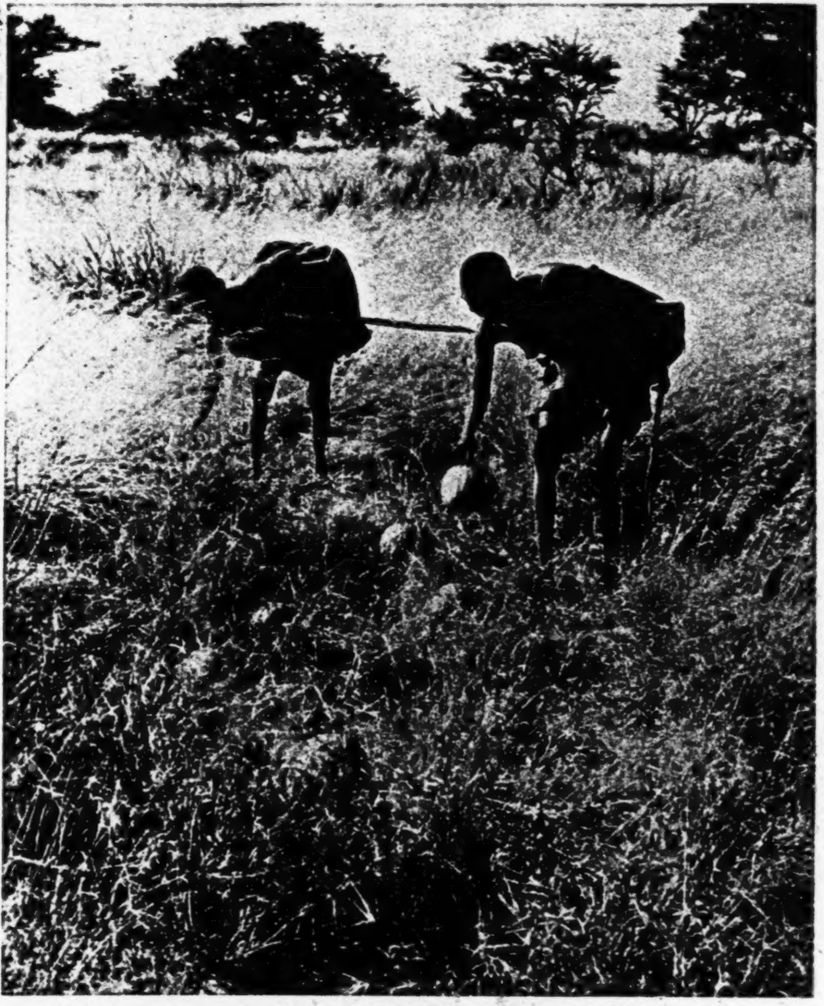

Tsama melons, on their vines, are almost hidden in the yellow grass, but Dasina and Twikwe find them.

[p. 112 (D)]

9: Thomas T-5 (1951-1955)1959

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when the tsama melons were gone, but now, perhaps when he 222
saw its vine there and thought about it under the ground, he
changed his mind. Squatting near the vine and digging with
his hands, he soon had exposed it, two feet down and dark in
shadow. He seized it and tore it from the earth.

It was shaped like a monstrous beet, with its vine coming from the top like a little stalk and its root bristling from the bottom like a tassel. It had a hard, bark-like crust and it was gray and hairy. Gai held it daintily by its vine, and, as dirt was still dropping off it he slapped and brushed it to clean it; then he held it high above the big cavity it had filled, looked at it with a rather satisfied smile, and said what nice water it would be.

We went home then, walking again in single file in a [4-81]
straight course over the veld, veering only once toward a [313]
fallen tree, where the women stopped to gather firewood. The
women, walking first, were heavily loaded now with melons, [4-82]
roots, and firewood, Tsetchwe loaded most heavily of all because the baby rode on her shoulder. The women used their
digging-sticks as canes because their knees were bending, and [4-81]
walked quickly, trying to get home as soon as possible. After
the women came the young boys carrying nothing, and last of
all came Gai, holding his bi by its tassel of root. Before long
he hurried and caught up to Tsetchwe, and once again he
took a turn with Nhwakwe, swinging him from Tsetchwe's
shoulders to his own, where Nhwakwe rode happily, his tiny
hands pressed over his father's eyes.

into their scherms, and in the morning there was a lake of 132
shining water on the pan and lilies growing everywhere, where only their dry leaves had been before.

After that the rain came often. Some weeks it rained a lit- 132
tle every day, some weeks the rain became torrential and flat- 136
tened the Bushmen's grass scherms, but it made the veld rich and green, with flowers everywhere and all kinds of fruit, which grew on trees and stalks and bushes. The pan became the home of shore birds, marabou storks and flamingos. Leopards and lions drank there, game antelope waded through it, leaving deep tracks in the mud, and the Bushman children [515
sometimes danced in the shallows, their feet making flashing, 142]
rhythmic splashes, or bathed themselves until their skins were shining gold.

One night I went to the werf with a lantern and suddenly found myself beset by insects flying all around me, attracted by the light. It was the mating flight of white ants, which had come out of the ground in great numbers and now filled the air. The Bushman men were away on a hunting trip, un- [222
fortunately, but the women came to the light as quickly as 262]
the ants and began at once to catch them and stuff them into their mouths, saying "*gurico gum*" as they did so, *gurico* being the name of the ants and *gum* the word used for candy, for sweet gum that oozes from the trees, and for sweet caterpillars. Much faster than the women could eat, more and more ants came flying in a swarm as thick as a blizzard and already the ground was white with wings, for the ants, throwing themselves to the earth, would drop their wings instantly and begin to mate with each other in twos, in threes, even forming in great circles that turned as the ants ran scurrying to keep their positions, each one mounted with its forefeet on the back of the ant before it, pushed on by the ant behind. Sometimes an ant would fail to shed its wings and, finding

green-leafed vegetables, and sometimes many of the people 361
of the large extended bands come together to live, to hold 621
important ceremonies which require many people, and to enjoy
each other's company. Sometimes they separate into very
small bands because they can now go anywhere they wish,
each family going to the part of the veld where the type of
food grows that the family most enjoys. There is water everywhere, 312
in small seasonal waterholes, in shallow salt pans, in
hollow trees, and the people thrive and grow quite fat. One
of their favorite foods, one that grows in great abundance at 222 262
this season, is a ground nut called *tsi*, which grows on a
trailing vine and is so fat that if you leave a kernel of it on
a piece of paper it will leave a greasy stain. Tsi is regarded by
the Kung Bushmen as a very powerful food, one of the powerful [778]
veld foods in which there is a special essence, something
mysterious and magic which gives them a life force all
their own so that it would be dangerous to eat them during
the year if this life force were not first subdued or not first
integrated with the life force of the people. These foods are 778
the mainstays of the Bushmen's diet, and are fat; and every 789
year people in their child-bearing years, when they consider
themselves subject to harm, protect themselves against these
foods by a ritual act.

The act of protection is called *choa*, and it is interesting
because it differs from the protective rituals performed by agricultural
peoples to save their crops or animals from harm,
or to cause their increase. The Bushmen choa themselves not [842]
to protect their fertility, for decrease in the number of children
is not a problem to them, but to make sure that they,
the young adults and mainstays of the community, will not
get thin and starve.

Those whom Bushmen call "old people," adults who have 789 885
had three children, are expected to protect themselves and
also to protect young people of the same sex.

302 accumulating dust had turned him black. When the rains came that year he had scrubbed himself with sand and water and had turned paler than the palest gold. No one had recog-
142 nized him for a minute and then people had made fun of him, so he had let his coating accumulate again.

361 That night the old man, Lazy Kwi's father-in-law, decided that his band would move with us to Nama, a pan near Gautscha Pan, for he and Lazy Kwi believed that if we went there they could help us find more bands of Bushmen whom we had known. No one, he said, was living at Gautscha this season and the people who belonged there were scattered through the veld because the rains had been so good that there was food and water everywhere. We said that we would
222 leave in the morning to begin the search, but the old man hesitated to agree and finally told us that in the morning he had planned to rob a bee tree, but after that he would be free to go. As he had hoped, the following morning we went with him on his trip for wild honey.

The bee tree was in a little forest about two miles from Gam, a forest filled with tiny yellow leaves and tiny seed pods blowing from the trees and scattered all through the grass, which in places had been plowed up by a wild pig rooting for bulbs. Because it was early in the morning and frosty, turtle doves were singing and the clear air was filled with their voices. Honey is always gathered at the coldest time of day, for then the bees are dull and stupid and it takes them a long time to collect their wits. The old man and Lazy Kwi cleared some grass and lit a tiny fire; then, squatting beside it, they warmed their hands, waiting for it to burn well, for they would use its smoke to numb the bees. Lazy Kwi's wife and
222 her sister had come too; they did not join the men by the fire
271 but walked off in the bush, gathering sour berries for their breakfast. The women in their wanderings found a hollow

9: Thomas T-5 (1951-1955)1959
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tree, and, looking inside it, found that it was filled with rain 222 271 water. They told the rest of us, who went to get a drink. It was just a dead and blasted tree full of murky water, but, standing in front of it, Lazy Kwi began to fumble in his hunting-bag for his drinking-straw. He slipped the straw into a crack in the bark, drank, and held the straw for the next person. The straw was a reed with a hollow center and very hard to drink from, I found when my turn came to take a sip, for it was badly cracked. It was all one could do to suck hard enough to moisten one's tongue, the water was stagnant, and the reed tasted strongly of the inside of Lazy Kwi's hunting-bag, but everyone drank, and when they had enough they returned to the fire. Something must have reminded Lazy [64-8] Kwi of the European farmers on the way, for he announced naïvely: "They did not give me a shirt to put on my body."

When the fire was burning well the two men went to the 222 bee tree. It too was dead, taller than the others in the forest and quite conspicuous. Lazi Kwi knocked on it with his ax and it gave forth a hollow sound. Then Lazy Kwi picked a straw and poked it into a tiny hole in the wood, and when he withdrew it there was honey on it and two bees. One bee detached itself and stung Lazy Kwi on the ribs and Lazy Kwi shook his skin like a dog. His father-in-law came forward with a smoking branch and held this near the hole. He blew smoke inside and the bees began to moan, low and ominously, the moan mounting in volume as Lazy Kwi chopped a piece from the tree above the hive. Four or five bees flew out of their hole; one flew at me and stung my face. The sting felt like a blow and in a moment the side of my face was numb and swollen. Lazy Kwi saw what had happened and he [752] scratched the sting out with his fingernail. The old man by now had chopped away a large section of the tree and the bees poured down from the opening like water from a tap, but

222 the smoke had confused them and they did not sting, although they flew everywhere looking for us. The old man turned his back, hunched his head between his shoulders, and hid from them as one would hide if one were being pelted with stones. When the swarm had dispersed a little he finished the opening. The Bushmen say that when bees are disturbed they are vicious only at first. After a while they become disorganized and confused and they fly about but do not sting you. When you smoke bees you must be careful not
778 to burn them or smoke them too much because they are
825 magic creatures with medicine to control fire, and if you harm them they will cause fire to burn you. A young boy whom we knew once burned some bees, and that night, when he was asleep by the fire, the fire sought him out and burned the skin of his belly, touching him only and no one else.

Lazy Kwi and the old man did the work perfectly. They were not stung badly, the tree was open, and no bees were seriously harmed. Inside the tree we could see the brown combs hanging and the bees as thick as fur around them. Lazy Kwi took out the combs and put them in a wooden bowl, licking his fingers afterward, and before we went back we ate some of the honey. There were two kinds, old honey and new honey, and the new honey was pale yellow and very
262 sweet and mild, winter honey made from the small, dry flowers of the veld. The old honey was much sweeter and strong enough to burn your mouth. Before we left, the old man
515 and Lazy Kwi carefully wiped their hands and arms with grass, for they were covered with honey and things were beginning to stick to them. Then we went back to camp and in the afternoon we packed to go on toward Gautscha Pan.

415
482 Lazy Kwi packed a skin bag full of tsi nuts and the seeds
222 of baobab fruit, alum-like powdery stones that ripen at the start of the dry season. The old man had a huge net bag filled

The water was darker now and roiled, and the stench was stronger. We went on after the Bushman women to find gum in the trees and then went home, and after that I had not been back to Nama. 222

Since then, the heavy rains had come three times, filling the waterhole and the lake and washing away the putrescence, leaving only the white bones sunk in the bottom of the well. Now the water of the lake seemed very pure indeed, with the ripples that the wind made shining like mica in the sun, and so clear that we could see every blade of grass and ice-cold stone on the bottom. Lazy Kwi and his family climbed down from the truck and squatted at the edge of the water to drink, scooping up water in their cupped hands. As they drank, Lazy Kwi found some Bushman footprints on the little shore which were many days old, just dents in the hard sand, but after glancing at them once or twice he said they were the footprints of strangers, a man barefoot, a woman in sandals, and a barefoot child, on their way to a place called Naru Ni, somewhere in the west. I don't know how he could tell all this, but I believe that he was right. Bushmen are always right when it comes to tracks, but also it is very unusual for Bushmen to travel through country that is not theirs, as these three must have been doing or Lazy Kwi would have known them. Naturally, we were very curious to know who they were and what they were doing, but their footprints told Lazy Kwi no more than that, and we never learned. 312 [271]

These were the only footprints that we found, but Lazy Kwi still believed that some of the people we had known at Gautscha in 1953 might be living there, especially Toma, the headman, for he had been there when Lazy Kwi had heard of him last.

. . .

752 had carried him there and it was there that the second group 648 of farmers had found him, unable to escape or to resist, and they had taken him away. His wife was still waiting at Gautscha and Lazy Kwi had returned there to tell her that her husband had gone.

At the farm, though, Toma's luck had begun to turn. The farmer had gradually managed to heal his wounds with medicine and treatment, and by the start of the dry season Toma had felt quite well. One night, when the veld was quiet and dark, Toma had thanked the farmer in his heart, had gathered all the Bushmen on the farm together, and had led the people over the veld, all the way back to Nyae Nyae. It had been a long walk, a long way, but Toma had managed. Now, said Lazy Kwi, Toma's wound ached on cold days and sometimes his vision was blurry, but he was pleased with himself and pleased to be back in his own country.

Lazy Kwi was pleased with him too, and he smiled when he finished the story.

When the first light of morning came, the air was so cold that our breath made clouds. We got up, fed the fire, and cooked the remainder of last night's meat, then drove off in the jeep again, for in that early light we had seen the smoke of three veld fires on the horizon, one in the south, two in the west, perhaps kindled by Bushmen during the night, perhaps revived by the wind from old embers, and we planned to make a circle to investigate them all.

● 222 On the way we found a bee tree that had been raided for its honey and we believed that Toma had done it, although the break was old and the bees were gone away; but after looking at it a moment Lazy Kwi remembered that he had done it himself during the last rains. He remembered too that there [153] had been very little honey and that he had got stung, and

since that was all he remembered we went on again to the 222 153
source of the first of the three fires.

It was there that we found Toma. He had been there all 609
the time, only a few miles from where we had camped, and when he heard our jeep coming he watched us over the top of a bush before showing himself to see first who we were.

We saw him when he ran toward us. He was quite far off and we saw first his dark figure detach itself from the bush and run with long, swinging strides toward our jeep. He waved his arms and we knew at once that this, at last, was Toma. Before he reached us a second figure appeared from behind another bush and ran beside him, and we knew from the disjointed stride that this second man was Gao Big Feet, Toma's brother-in-law. We turned our jeep toward them and soon we met and the two men embraced us and laughed and said that they had known we would come back someday, and then they climbed in the jeep and took us to their werf, stopping first to get their spears and quivers, which they had
left in the bushes, for no Bushman, no matter how excited, 576
ever greets people with his weapons on his back because this 578
might be taken as a sign that he was quarrelsome, looking for a fight.

Their werf was in a tiny thicket of thorn trees at the edge of 361
the plain, screened in front by bushes, carefully concealed, 609
but on a rise of ground where a man standing could easily scan the surrounding plain without being seen himself. There Toma and Gao Feet could observe the movements of the antelope that crossed the plains below them, waiting patient in the dappled shade of their trees' broad leaves as lions do. The two families stood in front of their bushes to meet us and they, too, embraced us and they all climbed in the jeep to do this, then climbed out again and stood back to see how we were.

9: Thomas T-5 (1951-1955)1959
FX10 Bushmen FX10
Kung

593 gether without speaking and then his wife lay down and he lay down and their fire began to die. Soon all the werf was dark.

513 In the morning, in the salmon dawn, the first light, we woke up to find doves singing and a fresh, warm wind blowing. It was easy to sleep now, and the people slept for hours, rolling away from their piles of ashes as the day warmed, until they lay curled or sprawled in all parts of the werf with Toma's son, by chance, asleep in the center, flat on his belly with his head in the curve of his arm, relaxed and strong and breathing deeply.

222 At noon the adults began to get up. The women went into
[252] the forest behind their werf for sticks to burn and a few roots to eat, and when they had built up their fires they roasted the roots and shared them with their families. Toma said that we would go back to Nama Pan right away, but his wife and the other women wanted to gather tsi; it was very abundant right beside the forest and they hated to leave all that food just lying there. "Perhaps other people will come here and eat it," said Tu, so Toma changed his mind and everyone took bags, nets, skins, anything that could be used as a container, and they spent the afternoon gathering tsi. They got mountains of it. There was plenty in the patch that they had chosen and with all of them picking the nuts from among the round leaves of the tsi plants they filled every bag, skin, and net that they had. They gathered almost three hundred pounds. The women felt so happy that they were singing a gay, light song in three or four parts. When the people had picked all they
431 could find, when every possible bag was full, they said they were ready to go to Nama, but when we brought the jeep and began to load it they were already busy with their endless preoccupation, that of giving and receiving, and had already

CHAPTER FIFTEEN

The Medicine Bees

222 THE DAY after the dance was the day before we left Nama to return to the United States. In all the time that we had stayed at Nama we had not been to Gautscha Pan, and now Toma said he wanted to go there to gather honey from the Gautscha baobab tree. Before we left, he sat in his werf telling me stories of people who thought that they could climb baobab trees but whose self-confidence had been excessive, because they had all fallen, each and every one.

481 222 165 Steinbok Gumtsa was one of these, said Toma, and he was an excellent climber. Baobabs that others could not climb he managed, and ate honey from the upper branches every time. One day, while watching bees fly about the top of the very high baobab at Gautscha Pan, Steinbok Gumtsa thought to bring himself luck and said: "I am going to climb, but I will slip and fall and be killed." The others told him not to try it, but he did. "He thought he was too good," said Toma, "and that is why he did fall. The others found him dead at the bottom."

One-eyed Nishi was another good climber. He also tried to reach the honey in the top of the Gautscha baobab, but he slipped and fell and the other Bushmen found him dead at

the bottom too, "with his head driven down between his 481 222
shoulders," said Toma laconically, hunching his own neck to 165
show how it was.

A third man whom Toma did not name climbed for honey in the Gura baobab, a tree somewhat north of Gautscha Pan, and he also fell; but, happily, he survived his experience. His sister and her husband were below him, watching, and when they saw him fall they held out their arms to catch him. He fell through their arms, of course, but his fall was broken and though he was unconscious for a long time he finally did recover.

The moral of these stories, Toma said, was to show that 867
young people should listen to older people and not act rashly. I believe that he thought I was going to try to climb the Gautscha baobab (which I had already done, though only to the lowest branch, fifteen feet from the ground), for he went on to say: "When Bushmen tell young people not to climb baobab trees they should listen. It is seldom that a person lives who falls from a baobab tree, they are so high. Even those good climbers I told you about, they all fell." I assured him that I did not even want to climb it and he said: "Good. When we who are experienced get the honey you can watch from below. Then you can see just as well."

The Gautscha baobab was somewhat east of the pan, and 137
we could see it rising from the plain when we were almost a mile away from it. It loomed up at the horizon, towering, its mass of upper branches hazy because we were so far. As we moved toward it, it seemed to move away from us like a distant mountain, but gradually, after a long time, it began slowly to get larger, looming higher, its top branches reaching up to the sky, where the clouds of spring were already forming as the desert got ready for the rains, three months [132]
away.

still there. Bushmen do not eat squirrels because squirrels 224 have no meat on their bones. Birds of all kinds lived in the 136 great tree too, and there was a hawk's nest in the upper [262] branches; I once had seen the two gray hawks that built it, but now they too were gone.

It was the bees that interested the Bushmen, though, and 222 those of us who had come from Nama—Toma, Gao Feet, Crooked Kwi, Lazy Kwi, my brother, and I—sat among the rocks at the foot of the tree, the men planning what they would do. I was so tired from having been awake all night to watch the dance that I lay down on the stones and fell asleep, and when I awoke, in an hour or so, the men had built a fire but were still arguing about who would brave getting stung to find the honey. No one really wanted to do it; but I saw that Crooked Kwi was almost persuaded, being very amenable and the youngest person there. Sure enough, taking a smoldering brand in his teeth, he at last began to climb the pegs, clinging to them with his fingers and toes. Toma followed at a distance, cautiously, urging Crooked Kwi on, and the two climbed higher slowly, Crooked Kwi looking down from time to time to be encouraged. When he did, Gao Feet and Lazy Kwi would shout for him to continue. At last Crooked Kwi reached the branch beside the hive and squatted there, blowing on his brand to make it smoke while Toma climbed past him, around to another branch, where he, too, squatted with his feet apart and his hands on his knees exactly as though his feet were on the ground, the branch was so wide.

Crooked Kwi found the hole, a small opening, though even from the ground we could see a few bees humming idly outside, and blew the smoke from his brand into it, then, encouraged by Toma, reached his slender arm inside to find a honeycomb. He was stung, of course, and snapped his arm out instantly, though even then the bees were not angry. None

● 222 came out of the hole. From the ground below, Gao Feet called up to ask why Toma himself didn't try to reach the honey and Toma said: "No! I might get stung!" then went on talking loudly to encourage Crooked Kwi. But when Crooked Kwi tried to smoke the bees again he must have blown in too much smoke or perhaps a spark which set the hive on fire, for clouds of smoke and many bees poured out of the hole and dead bees began to drop to the ground like rain. It made me sad to see them lying there, furry yellow, covering the ground.

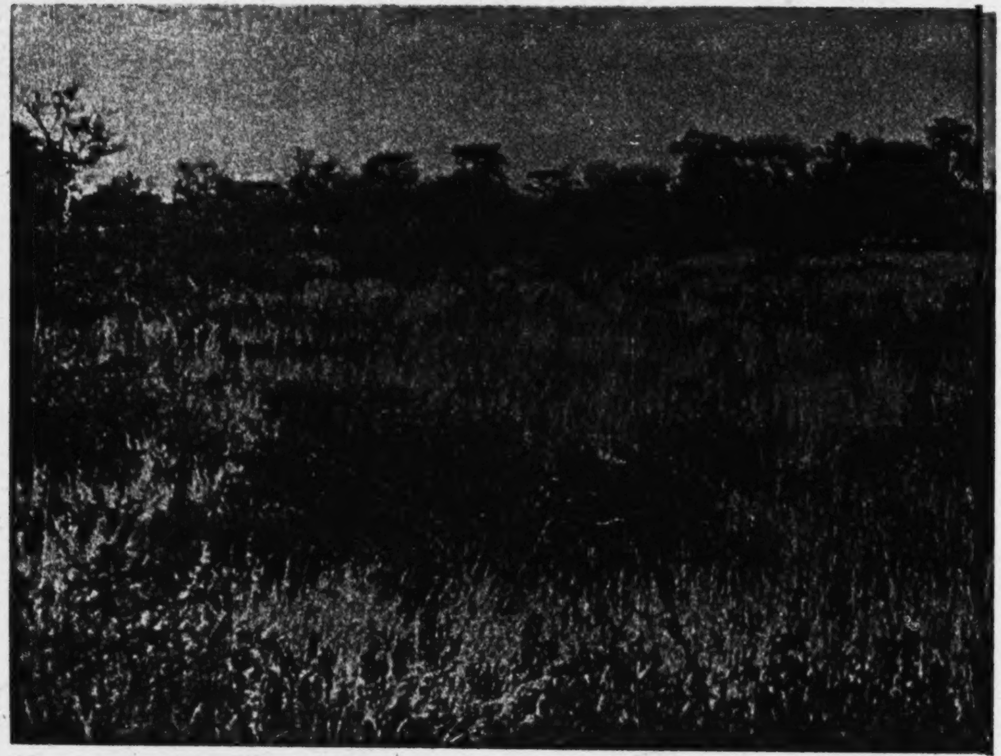
It is dangerous and bad to kill bees, and we paid for it. Crooked Kwi, slapping at the bees that stung him, climbed down as fast as he was able. He jumped the last few feet and, pushing through the people watching, ran out among the bushes, trying to elude the bees that followed him in a swarm shaped just like a cornucopia, the small end at the nape of Crooked Kwi's neck. No bees stung the rest of us, not even Toma, who was still clambering down. When Toma reached the ground he said that Crooked Kwi was no good because he had failed.

Thus Crooked Kwi paid for his crime, though the rest of us paid for it later. A few miles farther to the north, at Gura Pan, another baobab was growing. We could see the top of it from Gautscha and Toma said that we would try now to get honey there. When Crooked Kwi came back, rather embarrassed, we went on toward Gura, and even when we were far away from Gautscha we could still hear the bees that Crooked Kwi had angered moaning, a loud but sleepy sound. One of them must have followed us, for it stung my knee.

The Gura baobab was very tall, though not as wide as the baobab at Gautscha. The southern face of it had been charred by a veld fire and was also bristling with pegs, old ones, new ones, in trails or little pathways up its side, as Bushmen had been robbing its hives of honey for years. Gao Feet said 222 that its hives were raided every few months or so and wondered if there would be any honey left for us. While pondering this question we stopped at the base of the tree and looked up, high above us, at a crack in its trunk where bees were flying, and in a moment, to my great surprise, the whole hive of them had poured down over our heads and were stinging us badly. We dropped everything that we carried and ran as fast as we could into the bushes, slapping wildly at ourselves, scattering in every direction, and each of us, as we reached thick bushes, hid in the branches, only to be routed out again by someone else pursued by bees, and in this way we were scattered further. Far from the hive though we were, the air around us was full of bees; they kept us hiding and cowering like jackals, peering out from under bushes, away from our water jars and ostrich eggs which we had dropped in our hurry, and they held us in this way for hours. We were tired 222 825 and wanted to go home, but we could not leave our water. I, 778 at least, was astonished that such a thing should have happened, but to the Bushmen it was no surprise. The bees, those magic, medicine creatures, were having their revenge. As a group, we were responsible for having killed the bees of another hive. The Bushmen were only surprised at themselves for not having foreseen the disaster.

In the middle of the afternoon my brother borrowed every- 222 body's clothing and, 271 swathing himself in it while the lenders crouched naked in the bushes, braved the swarm and retrieved our water. Then we went back toward Gautscha, pausing on the way to dig a water root which Lazy Kwi had known was there. The root was quite large, very wet, and though it was as puckery as alum it did quench thirst.

Late afternoon had come now, and I was so tired that I sat 000 down to lean against a bush, where I almost fell asleep. Toma



COLLECTION OF FOOD, in contrast to hunting, is women's work among the !Kung. Almost every day, they leave camp to gather *veldkos* (roots, berries, nuts and the smallest animals) in the wild bush. The basic tool is the digging

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Il: Marshall E-5 (1950-1955) 1958 FX10 Bushmen FX10
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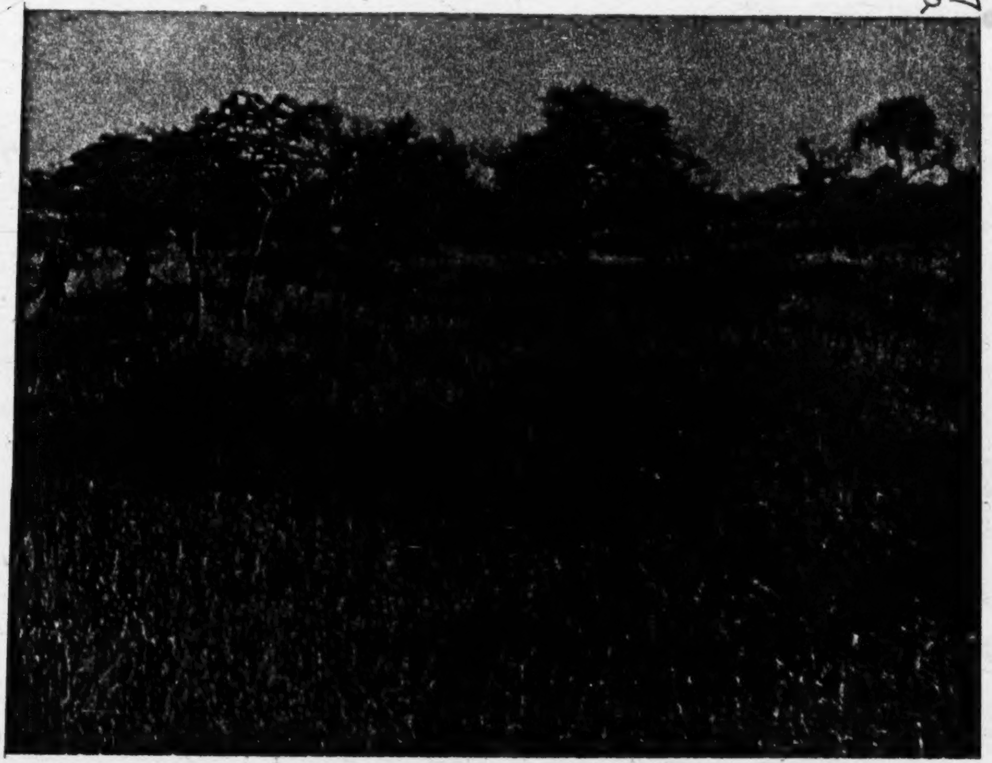
[P. 10]



stick, fashioned by the man of the family from a tree-branch. Children soon learn, by watching, to identify more than a hundred edible wild plants. *Above*, four women, one with a young child, set off across the veld for food.

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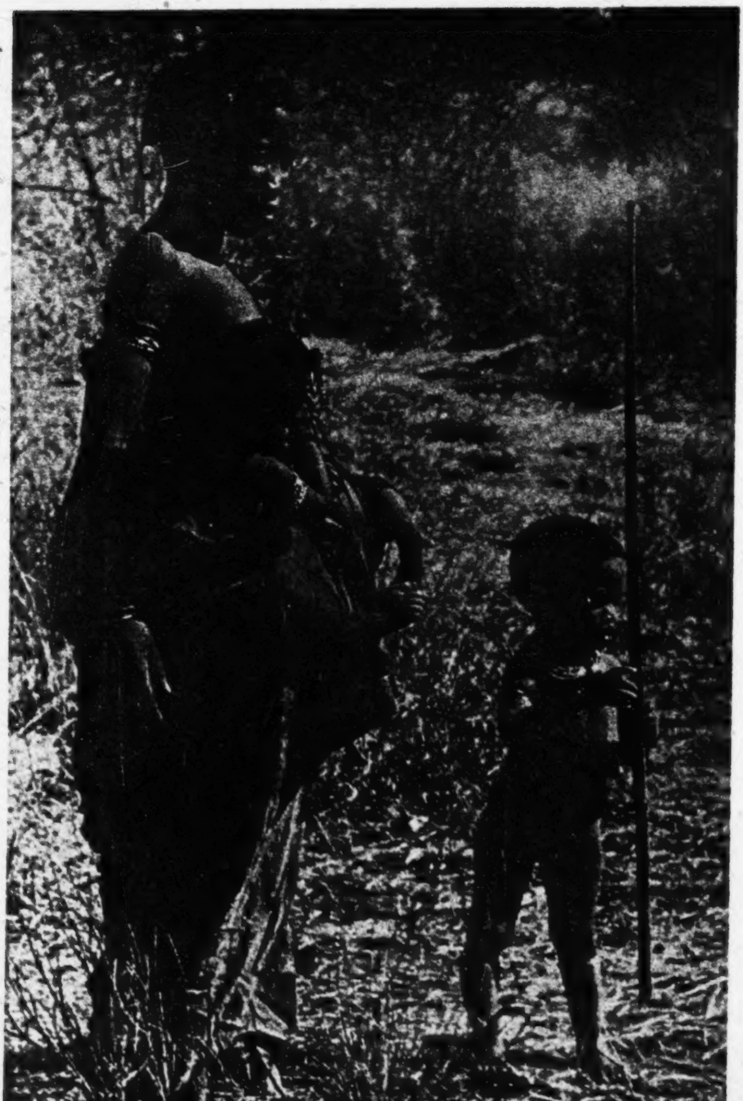

!Kung mother, collecting near camp, cradles a suckling daughter in a fold of her skin *kaross*, while her toddler son carries along a stick of his own.

[p. 11]

MOST ROOTS are dug up for food, but the ones held out, above, are valued for their bark. When it is powdered and rubbed on, it turns the skin red.

LITTLE ESCAPES the women's eyes in their intense search for food, *below*. Even small animals—like turtles and grasshoppers—are carefully gathered.

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SKIN KAROSS, being stitched, *above*, is the !Kung's most important garment, while nuts from the *tsi* and *mangetti* trees (in pot, *below*) are chief food.

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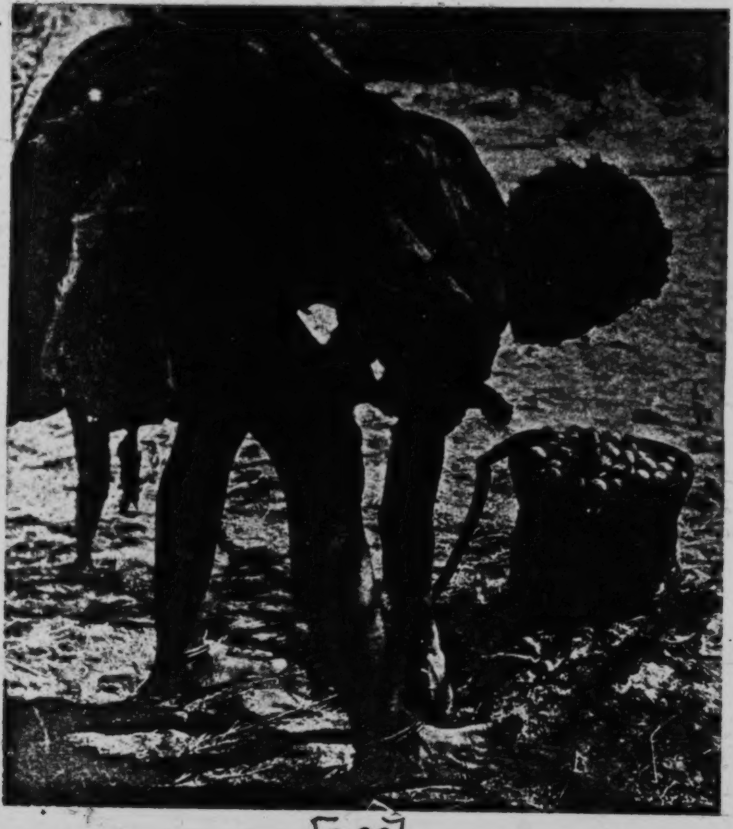

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DELOUSING is a courtesy among kinsmen: the salty-tasting lice are eaten.

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There are about 1,000 !Kung—gathered into 28 bands—who build their ephemeral camps, or *werft*'s, separately in an area of 10,000 square miles. The houses in the *werft*'s are of grass, pressed over a framework of sticks, making small quarter-shells, with their backs to the prevailing wind. Gossamer things, made of the same grass that sways and crowds against their doors, they are positioned in a loose pattern according to their occupants' kinship, and all are held—finally—by the headman, who builds his shelter under the tallest tree. [622]

From a little distance, when the sound of voices is lost on the wind, one would not know a *werft* was near. The people never return to the same *werft*—preferring to build anew and saying it would not be safe from the spirits of the dead, or sanitary, to do so. Perhaps, also, they find it sad to see the little houses toppling, day by day, into the grass of the new year.

462 AS A STARTING POINT, labor among the !Kung is divided between two basic subsistence activities—hunting game and gathering *veldkos*. Men hunt, because their bodies are better suited to the chase. Women gather, because they could not leave their children for the long periods of hunting that men both enjoy and endure.

222 Women's work—the technology of gathering—is simple and adaptable: the tools are easily acquired, the methods quickly learned. The constant necessity to provide and the almost daily edge of effort slowly bends the

[p.40]

114 JOHN MARSHALL is one of a family that has been studying the Bushmen for nearly a decade, in expeditions to South West Africa by the Peabody Museum, Harvard University.

● 222 !Kung women, who are slender-armed and do this monotonous work to the end of their lives. All roots—a major food—are gathered in identical fashion. The implement for this is a digging stick—made usually by a woman's [412] husband from any of a number of hardwoods: the bark is peeled from a branch, a point is whittled sharp. Women, squatting, dig narrow holes in the earth with these sticks, and tug until the root they have reached comes free. Berries are picked—high ones jostled down with sticks and sought for carefully among the grass stems. Nuts are collected on the ground.

224 SMALL ANIMALS, such as tortoises and even grasshoppers, are sometimes captured by the women and brought home in the evening—such small creatures are also considered *veldkos*. The women, too, will kill snakes, even puff adders. When they see a puff adder, they gather around it in a little crowd, their high laughter tinkling while they drop large, heavy things on its flat head.

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461 Averaged over a year, women gather on four or five days of each week—the number of days depending

[p. 41]

222 on the season. In the long days of wilting
461 between the October spring and
the January summer, food is scarce
and the women may go out every day
into the failing veld, leaving their
werft early in the morning and returning
late in the afternoon. All
222 that a woman gathers belongs to her
422 alone, and of course is shared with her
family. She feeds her husband, her
593 children and often a visitor or two, at
her own hearth. No formal instruction
222 is practiced among the !Kung, with
the possible exception of certain kinds
868 of religious teaching and what might
be called an occasional hunting school.
857 Learning to gather comes from the
children's observation of the more experienced
women. Girls soon learn to
[824] recognize more than a hundred kinds
of edible plants that grow in *Nyae
Nyae*, as well as the seasons and places
in which these plants grow. They learn
to see tiny, shriveled root vines coiled
around thorns in the thickets and, in
the process, develop fine powers of
observation. Possibly complementary
to this lack of formal instruction, no
formal pressure is exerted on young
people to take up adult roles. Girls,
if they wish, accompany their mothers
on gathering trips. If they do not, they
rarely feel guilty. A girl usually begins
[582] to feel responsible soon after
she marries, which is often before
puberty. But only when she has children
of her own does a woman see the
world through the eyes of a provider.

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WITH THE SUMMER RAINS, the nuts of the *mangetti* forests – related to the almond – begin to mature. The !Kung arrive as soon as possible to start collecting. In winter,

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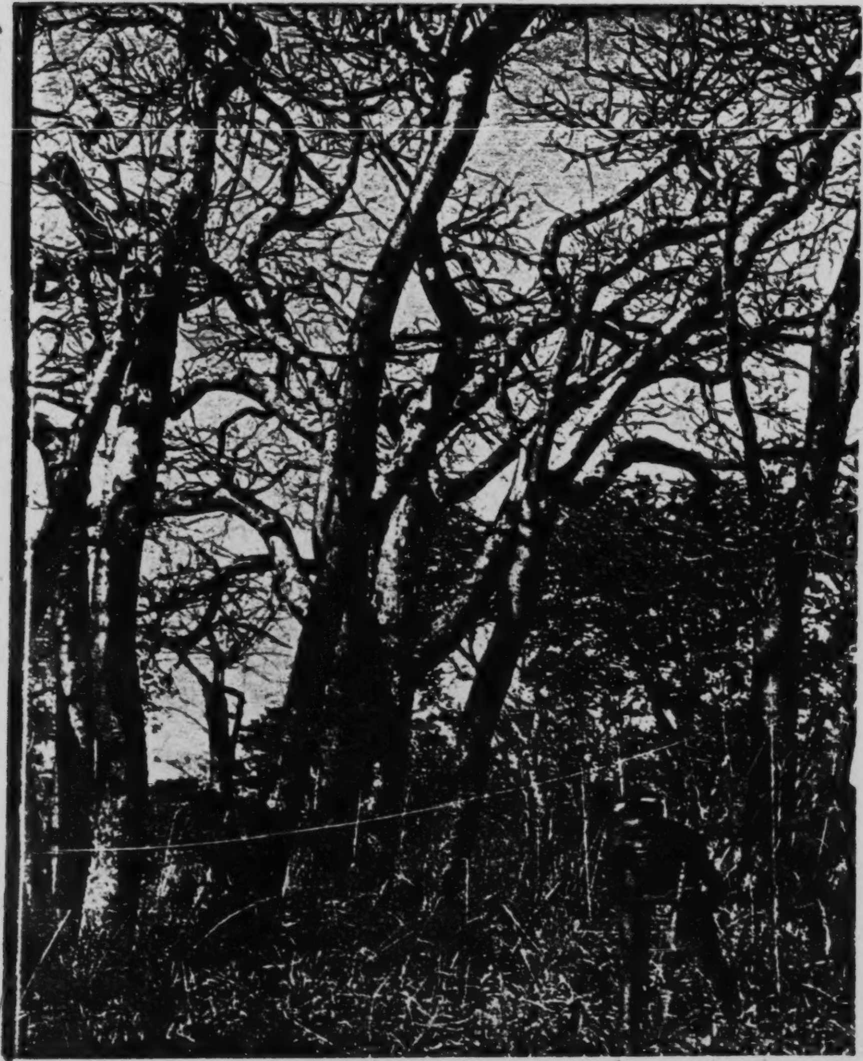

WITH THE SUMMER RAINS, the nuts of the *mangetti* forests – related to the almond – begin to mature. The !Kung arrive as soon as possible to start collecting, pay later visits as well. In winter, above, they search again.

[p.44]

312 TEN permanent waterholes, as we have seen, occur in two areas—around the ring of pans in the east center of *Nyae Nyae*, and along the eastern border. To the west, beyond the limit of the pans, there is no water in the long dry seasons. Around each permanent waterhole, the *veldkos* near enough to be gathered in a day are considered by the !Kung to be an integral part of that waterhole. This means that such a waterhole includes both the water itself and all the *veldkos* within a circle with a radius of some four miles. This area might be called a certain waterhole's "district," taking its name from the waterhole. When a man mentions a waterhole, he usually has such a district in mind.

● 222 484 Yet neither the *veldkos* in these districts nor the *veldkos* scattered between the districts, nor the game, which wanders, constitute the main

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food resources of *Nyae Nyae*. Instead, these are the *mangetti* and *tsi* nuts. Both are found only far from permanent water. Distance becomes more significant when one thinks not only of miles—but of time, footsteps, heat and carrying capacity. From the nearest western water, it is about twenty miles to a *mangetti* forest. The distance between *tsi* and the closest water is about seven miles. The [481] people calculate their marching ability at about ten miles a day, with women and children, although men can make forty if necessary. They gather food as they travel, for a day of traveling is just like any other day, with children and old people to be provided for.

221 In order to exploit the environment successfully, with their limited technological equipment, the !Kung must move from place to place. The calendar of their movements is revealing. In winter, the people are forced to remain near the waterholes,

776 [576] only for females, ***kolidi***, a term which one may also apply to women when one wants to be especially polite and to honour them. It is used for women ' who possess lots of things ', the /Kung explained. *Gaoxadi*, the female form of one of the respect terms for the gods, may also be applied.

● [222] *Khwova!na* is also called ' the mother of the bees '. When men go to look for honey they pray to her.

' The wives of the gods have the same work as their husbands. Their work is also strong ', we were told.

The Names of the Children of the Gods

The names of the six children of the gods are as follows: for the boys—*|Kwa ma*, *Nami*, *|Kung go*; for the girls—*|Kharu*, */Nai*, */Kow*. *Nami*, *|Kharu*, and */Nai* are familiar names to me, the others are not. These names are from Robert Dyson's notes (for which I want to express my gratitude), and it is possible that the name he writes */Kow* is the same as the one I write *||Gow*. As I have said, such questions and discrepancies about words are very common.

In the myths, but not in the /Kung's current account of their beliefs, *≠Gao!na* has two other sons who are involved in many strange events with their father. Their [821] names are *Khan||a* and *Kxoma*. They were turned into the two stars in the vertical axis of the Southern Cross which now bear their names. Alpha Crux is *Khan||a*; Gamma Crux is *Kxoma*.

Miss Bleek was told that *Hishe* was sometimes ' followed by children like baboons '.[1] The image this gives of the divine children leaping and playing and following like infant baboons is amusing. The image which the Nyae Nyae /Kung have, however, is very different. ' The girls are fresh and beautiful ', they say, ' not ugly like Bushmen.' Their skin is the colour of Bushman skin but at its lightest shade (*gau*).

[775] The children are called little *||gauwasi* (*si* is the plural suffix). The spirits of the dead are also called *||gauwasi*. It is the children's special duty to carry the spirits of mortals, when they die, from the dead bodies to their ' father in the sky '. We were told that the little *||gauwasi* are helpful to humans. ' They watch over them and help to prevent *≠Gao!na* from getting angry.'

Terms of Respect and Disrespect

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576 In addition to the names, the Nyae Nyae /Kung apply three terms of respectful address to the gods: ***gaoxa***, ***n/iha***, and ***!nau***. As I mentioned in my paper on the structure of bands,[2] the terms *gaoxa* and *n/iha* may be applied also to human chiefs, or to persons who are over others, like a district commissioner, and they are sometimes applied to a Bushman headman, although, to be strictly proper in /Kung, a headman is called *kxau*, ' owner '. *Gaoxa* is the more exalted term. Some informants felt that to call a man *gaoxa* was to compare him to the deity, which might anger the gods. Others felt that it ' sounded like a curse ' to call a man *gaoxa*. The term pleases *≠Gao!na*, however. When he hears it applied to himself he knows that the people respect and fear him and ' he has a good feeling about them '.

!Nau among the Nyae Nyae /Kung is a term of respect for any old man and it is

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[1] Schapera, op. cit., p. 192.

[2] Cf. Lorna Marshall, ' /Kung Bushman Bands,' *Africa*, vol. xxx, no. 4, Oct. 1960, pp. 325–55.

182 A lack of permanent water is probably the most trying of the difficulties
312 which beset the Bushmen of the present day in the country which shelters
them. However, it is this very disadvantage which has ensured their survival,
[161] for while they have been dispossessed of their country and exterminated in
[648] the less arid parts, in the "Great Thirst Land of the Kalahari" they have been
comparatively safe from their European and Bantu enemies. The austerity
134 and hardships of the Kalahari are offset to some extent by its deep level
mantle of sand, which prevents run-off of the rainwater and makes it readily
available for plant growth. "Clay, for example, is as dry as dust to the plant
when it contains 18% of water, while most sands are very nearly saturated
with 18% of water" (Schantz 1911). This means not only that the sandy
soil can support more luxuriant plants in greater variety, but also that storage
organs are common among them, for drainage in sand is so rapid and thorough
that shallow-rooted plants at least are in a stronger position if they
are able to collect and store the water before it sinks into the deeper layers.

137 Although some of the storage organs are poisonous, the Bushmen still
have numerous edible bulbs, tubers and roots at their disposal. Thanks again
● [222] to the sand, they can harvest these quickly and easily with wooden digging-sticks
which would be inadequate in a heavy or stony soil. Other storage
[224] organs which they do not eat because of bitterness or high tannin or fibre
[262] content are nevertheless important indirectly through being eaten by the
various antelopes that are the Bushmen's meat supply.

Hunting is easier as well, for as there could be few better tracking surfaces
224 than the Kalahari sand and, as a wounded animal can thus be followed
with very little risk of loss, hard-hitting weapons and careful aim are not
[411] necessary. Instead, the Bushmen use small poisoned arrows which have the
advantage of being effective on any part of the body and of bringing death
as certainly to big game as to small.

101 **LINGUISTIC AND BAND GROUPINGS** • The major groupings among the Bushmen
197 cannot correctly be called tribes; they are, rather, linguistic groupings
and the names by which they have been traditionally known by Europeans
refer to language: for example, !Kung-speaking Bushmen, Naron-speaking
[829] Bushmen. The Bushmen themselves and their Bantu neighbors use a multitude
of names by which they refer to various combinations of local groupings.
[184] Our own tentative and incomplete comparisons lead us to say that the
language groups differ from one another markedly in some customs while
they are much the same in others.

The language groups have no political unity among or within them-
[622] selves. The only social unit larger than the family is the autonomous band
[622] composed of several families and headed by a headman (see "Political Organization,"
p. 267). Each of the major groupings has many bands within it.

101 The Bushmen whose social structure I describe in this chapter are a
131 group of !Kung-speakers who call themselves *ju /ŏassi* and who live in the
[197] Nyae Nyae region of South West Africa. It is a region of about 10,000

square miles, centered approximately at Gautscha (about 19°48'30" S. 181
20°34'36" E). The region lies for the most part in South West Africa, but 131
extends into the Bechuanaland Protectorate to a number of Tswana and
Herero settlements along the border. We arbitrarily call this particular stretch [123]
of country a region because it is a region in the minds of the Bushmen. In [162]
it are some 27 bands living independently in their own traditional way and [648]
9 groups employed by the Tswana and Herero—a !Kung population of
about 1000. These !Kung intermarry. They have not formally structured the [582]
region as an endogamous unit, but they remain within it by custom and
preference. They know there are other !Kung-speakers living to the north [192]
and northwest of them, but consider them strangers, as they do the Auen- [822]
speaking and Naron-speaking Bushmen to the south.

ECONOMY

It is vividly apparent that among the !Kung 181
Bushmen, ethos, or "the spirit which actuates manners and customs," is sur- 182
vival. Their time and energies are almost wholly given to this task, for life in
their environment requires that they spend their days mainly in procuring
food. The band organization is important to their survival, and, to secure the [621]
mutual support and companionship that it affords, they seek to regulate their [578]
social actions to reduce tension and potential hostility among the individuals
within the band. They also strive to avoid the possibility of conflict between [628]
bands. Similarly, in their religious concepts and practices, the emphasis is on [771]
survival in this life on earth, not a looking forward to the eternal life in the
sky after death.

WILD PLANT FOODS (*veldkos*) • The !Kung of the Nyae Nyae region 433
have no agriculture. They subsist mainly on wild plant foods, which we re- 262
fer to by the convenient Afrikaans word *veldkos*. The game the hunters of
a band manage to kill is an important part of their diet and much desired,
but it is by no means the daily sustenance. In this region the !Kung know 222
more than a hundred different kinds of veldkos (cf. Story 1958). Several 262
species of berries exist, dry and hard for the most part. A few fruits ripen
suddenly in a short season. Leaves, resembling spinach, make a spring salad
for a short time. Morsels of gums from certain trees are cherished like sweets.
Tsama melons and wild cucumbers grow here but do not abound in this region as they do in some other parts of the Kalahari where some Bushman
groups can live on them for certain seasons without having access to any
water. Most important to the daily sustenance of the Nyae Nyae !Kung are
the edible underground roots, tubers, and storage organs of certain drought-resistant plants. We observed the gathering of 23 different kinds of these;
doubtless there are more. In addition to the roots and tubers, there are sev-

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Gathering Mangetti Nuts

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eral large groves of mangetti trees (*Ricinodendron rautanenii* Schinz) in the region, all on great waterless white sand dunes, and one extensive area in which *tsi* grows. *Tsi* (*Bauhinia esculenta* Burch) is the seed of the vine that [782] runs along on the surface of the ground. Both mangetti nuts and *tsi* are excellent foods, rich in oils and proteins, and so important to the !Kung that they organize their lives to a considerable extent around them.

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Each band, according to !Kung social structure, owns and lives within what we call a territory. The band, through its headman (in a way to be explained later), owns the veldkos and water resources within its territory. The territories are varied in size and shape and sometimes consist of portions that are not even contiguous. The boundaries are vague, for the need [161] [162] to draw fine boundary lines is not great. In the interior of the region, where water is so scant, in roughly 8000 square miles live only 17 bands, comprising 447 persons. The other bands and employed groups live on what we call the periphery of the region. The !Kung say that one cannot eat the ground itself so it does not matter to whom it belongs. It is the patches of veldkos that are [361] [illegible] clearly and jealously owned, and the territories are shaped in a general way around these patches. The !Kung of the interior have settled themselves in such a way that every band has access to areas of edible roots and to either a mangetti grove or a *tsi* patch. A few bands have both.

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[illegible]
[illegible]
The strong concepts of ownership of veldkos by the band operate almost like a taboo. No external force is established to prevent one band from encroaching on another's veldkos or to prevent individuals from raiding veldkos patches to which they have no right. This is just not done. Fear of fighting is one of the deterrents. The poisoned arrows of the Bushmen are as deadly

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The poisoned arrows of the Bushmen are as deadly 628
to man as to game and they are always at hand. A mere nick and a speck of 721
poison in the bloodstream can be fatal. There are no known antidotes. [811]

As skilled trackers of game, Bushmen develop their powers of visual observation [151]
and train their visual memories to such a high degree that they
know everyone's footprint as well as his face. This is another deterrent, for
no one could steal veldkos without leaving his marks and having his identity
detected. Theoretically, in !Kung society the thief may rightfully be killed by [685]
the person or the band from whom he has stolen, but he may fight back, and
relatives could also become involved and the fighting would spread. In the
opinion of the !Kung, situations likely to engender hostility are assiduously to
be avoided, to say nothing of actual fighting. Breaches of this intention are
very rare.

Life throughout the seasons is planned around the veldkos gathering. 221
The people know at what seasons the various veldkos will ripen and about 222 ●
how much each patch will yield if the rains have been good or if they have [182]
been poor. The !Kung are not, according to our way of thinking, exactly conservation-minded,
but they do plan to consume their veldkos in advantageous
order. They eat the perishable short-seasoned leaves and the few fruits as [262]
soon as they ripen. They leave until the dry season is advanced certain beds
of roots and tubers that are edible the year around if they remain in the
ground.

The headman of the band has the authority and the duty, according to 622
!Kung social regulations, to plan the band's movements, to say to which 222
veldkos area they will go and when, and, if the band separates temporarily
into segments, to know where each segment is going and, in general, what
veldkos it will consume. It is a matter of life and death to plan and control
as best they can and not to travel for days, counting on food and finding that
one segment of the band has eaten it all, unbeknown to the others.

Each type of veldkos and each area presents its problems of logistics, 222
water being the determining factor in the plans, for usually water and 312
veldkos are not in the same place. During the big rains and for several weeks 221
after, the pans and vleys become shallow ponds and small, temporary water
holes are filled. It is the time of relative plenty. The people find sufficient
water to enable them to move about with comparative freedom in their country,
wherever there is something to gather. When the dry season sets in, [415]
the problem is to carry enough water from the water hole to the veldkos area [237]
in ostrich egg shell containers and to carry enough veldkos back to the water
hole. It is a ceaseless labor.

The distances the !Kung travel between water and fertile areas in these [484]
gathering trips vary from a few miles to twenty or thirty. The people do not
manage greater distances except in the rainy season, when they go as far as
seventy-five miles to a mangetti forest.

When the people go to gather mangettis or *tsi*, the men always ac-

15: Marshall E-5 (1951-1961) 1965

FX10 Bushmen FX10

!Kung

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On the Move A Bushman hangs his possessions on a carrying stick and thrusts his assegai under the stick in back to distribute the weight onto both shoulders.

● 222 When the people go to gather mangettis or tsi, the men always ac-
462 company the women and help to gather and to carry the heavy loads—as
much as they possibly can—back to the water hole.

Though the men help, especially with *tsĩ* and mangettis, gathering and
digging are the work of women and the work that takes up the greater portion
222 of their energy and time throughout their lives. Their digging imple-
[412] ment is a sharpened, unweighted stick about three feet long. When we were
[101] living with the Gautscha bands at the Gautscha water hole in the dry season,
the women went to gather every day or every second or third day, depending
on the distance and on how much food they could carry back. They would
plan which patch or fertile area to go to and start out in small groups, some
[484] to one place, some to another. They would walk five or ten or fifteen miles
[361] to their destination and then pick berries or dig roots, which may lie two
feet or more under the ground, until the mid-afternoon, and then start back
[854] to the werf (campsite) at the water hole. They carry their infants tied to
[482] them, small children on their shoulders, and the loads of veldkos in the
[372] bulges of their karosses (skin capes). When they near the werf, they pick
up two or three logs for the night fires.

The veldkos that each woman gathers belongs to her and with it she
feeds her own family, sharing with whatever relative or friend she wishes.
Custom does not require her to share it in a systematic way with others as
252 meat must be shared. She cooks her veldkos in the coals and hot ashes,
264 pounds fibrous roots and hard berries in her mortar, and serves the food to
her family as a family meal, usually in the evening. During the day, however,
people may cook and eat little snacks at odd times.

222 Although there are numerous kinds of veldkos, we must not give the
433 impression that there is a great abundance. In fact, the opposite is true. Food
731 is scarce all over the arid Kalahari, where drought is the scourge on all—the
cattle raisers, the dry farmers, and the gatherers of the wild foods.

128 There has been much intermarriage in the Nyae Nyae region. Families
166 therefore may have close relatives—with whom they have the right to live—
[582]

[p. 250]

224 meat to the owners of the territory should they happen to encounter them,
[431] but this is a gift, not an obligatory tribute. The vastness and emptiness of
[182] the country allow this freedom in hunting rights and the wandering nature of the game requires that the hunters, if they are to succeed at all, be free to look for game wherever they can find it.

● 222 The !Kung eagerly pick up tortoises, certain kinds of lizards, snakes, ostrich eggs, and grasshoppers, and they relish termites when these insects
[262] swarm out in nuptial flight. These items provide incidental delicacies and gathering them is like the gathering of veldkos. The person who gathers
224 them may keep them for himself and his own family. Men gladly shoot small
223 animals and birds if they happen upon them—wart hogs, duikers, other small antelope, porcupines, badgers, pythons, spring hares, ostriches, paouws, guinea fowl, red-winged partridges, occasional migrating geese, and other birds. They may keep them for their own families. They do not, however, devote their hunting time to the smaller animal creatures if they find fresh spoor of the larger ones. Hunting the big game animals that feed a whole band is the work of a man's prime and is incumbent on him.

224 Hunting parties usually consist of from two to four or five men. A man cannot hunt effectively alone in this country. Several parties hunting in different directions are more advantageous than one larger party. Any man may organize a hunting party, with relatives and friends from his own band or from neighboring bands—men he likes to hunt with. No one is formally a leader; the men talk and plan together and are likely to fall in with the suggestions of the one whom they consider the best hunter. Participation in any given hunting party is voluntary. What !Kung society urges is that the
[461] hunters hunt; it does not restrict the ways and means. The force of public
[626] opinion upon men not to sit in the werf, not to be lazy but to do their share, is tremendous.

The game the !Kung hunt deliberately and purposefully are the several big antelopes found in the region: eland, kudu, gemsbok, wildebeest, hartebeest, springbok. They also hunt the more rarely seen buffalo and occasionally manage to shoot a giraffe. Although there is this considerable variety of kind, there is not a great abundance of game. The herds are small and the hunts long and hard.[8] The antelope, because they can go for long periods without drinking, move and drift about anywhere in the vast monoto-
[464] nous veld and are very difficult to find. Hunters often search for days, covering scores of miles, before finding spoor fresh enough to follow, and they may
[411] follow it for days before catching up with the animal. Their little arrows kill by poison rather than by piercing deeply, and, when an animal is shot, if it is big, it may wander for three or four more days until it dies of the poison.
[136] Smaller animals succumb in a shorter time. The hunters must track the animal and find it before the lions, leopards, hyenas, jackals, or vultures devour it.

121 view of the Bushmen. The present study is a contribution to this reorientation and, as such, has implications, not only for Bushman studies, but for the study of hunters and gatherers in general.

The study of subsistence ecology focusses attention on those aspects of the man/environment relation which pertain to the getting of food. Since there are populations of Bushmen available which still maintain a full-time, year-round, hunting and gathering way of life, an investigation of subsistence ecology can be founded on a firm empirical basis. The investigator does not have to rely on the memory of informants concerning conditions no longer in existence.

121 114 171 Another recent study - of the subsistence activities of Australian aborigines in Arnhem Land (McCarthy and McArthur 1960) - offers an instructive contrast to the present study. Both studies are concerned with the subsistence ecology of hunter-gatherers. The difference lies in the fact that the Australian groups studied spent the greater part of each year living on mission stations where they ate European foods. Consequently, the Australian scientists could observe traditional food getting for two week periods that were bracketed by periods of residence on the mission stations. The Bushman study, on the other hand, is a continuous record of hunting and gathering
121 222 224 activities extending over a fifteen month period. The Dobe area Bushmen were hunting and gathering for the simple reason that

121 there was no viable alternative locally available to them.

222
224 The presence of these conditions has made it possible not only to observe ongoing subsistence behavior, but also to attempt to understand the dynamics and the underlying rationale of hunting and gathering as a total way of life.

R.B.L.

Cambridge Mass.,
July 1965.

121 (George Silberbauer) was already conducting research among the Bushmen of the Central Kalahari Game Reserve.

After DeVore's return to Harvard in September, the author surveyed the Ngamiland situation and found that the Bushman population in the northwestern sector satisfied our research requirements.

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In October, 1963, there were about 430 Bushmen living at nine waterholes in the !Kangwa administrative district. Over 70% of these people were organized into bands and depended on hunting and gathering for their subsistence. Although some 340 Bantu lived in the district they had not established a lord-client relationship over the Bushmen. This feudal type of social system exists elsewhere in the Kalahari but not in 114 the !Kangwa district. The author was the first white person to live in the district. The Marshall expeditions had touched the western edge of the district but had centered their research at /Gautscha, a camp about 40 miles west of our area.

The main field station was set up at Dobe, a small waterhole in Bechuanaland, two miles east of the Bechuanaland - South West Africa border. The author conducted research here for twelve months, except for intervals of work elsewhere in the Kalahari and study periods in Livingstone, Johannesburg, Windhoek and Capetown.

In October, 1964, Irven and Nancy DeVore joined the author

[TEXT CONTINUED ON PAGE 6]

II. THE PRESENT STATUS OF THE BUSHMEN

Defining Bushmen

101 Bushmen may be defined racially, linguistically or
culturally. None of these criteria used alone will give a
142 satisfactory definition. If the presence of "Bush" physical
144 type is used as the criterion of Bushman status, then some
members of Hottentot tribes would be incorrectly included,
and members of the hybridized Bushmen peoples of Ngamiland
197 would be excluded. Similarly the presence of a click non-
121 Bantu language would include not only Hottentots again, but
also the Hottentot speaking negroid Bergdama of South West
224 Africa, and the Hadza-Sandawe peoples of Tanganyika. A
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464 strictly economic criterion, such as the presence of a hunting
648 and gathering way of life would arbitrarily exclude the many
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233 thousands of Bushmen who are working on European Farms or
practicing agriculture and pastoralism.

114 A further complication in defining Bushmen is offered by
197 the recent work of Westphal (1962a,1962b,1963). He has demonstrated that the so-called Central Group of Bushman languages
of Bleek (1929) are in fact closely related to Hottentot.

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[114] In this paper a simple ethnic definition of Bushmen is
adopted, following the lead of Joyce (1939) and Tobias (1956).
Throughout Bechuanaland, the Tswana word "sarwa" is applied to

The economic position

114 Tobias erred when he estimated that in 1956, 35,000 of
224 the 55,000 Bushmen "lead a hunting and food-gathering life,
• 222 barely removed from that of the late Upper Palaeolithic or
161 of the South African Later Stone Age." (1957:33). The first
comment concerns the numbers of Bushmen still hunting; the
second the "primitiveness" of the modern Bushmen hunters.

162 Of the 15,000 Bushmen in South West Africa at least
131 9,500 are working on European farms. An additional 3,000
464 are either working for Bantu agriculturalists or practicing
648 agriculture and stock-keeping themselves. (Republic of
224 South Africa 1964:29,41). This leaves 2,500 as hunter-gatherers in South West Africa.

In Bechuanaland an estimated 16,300 Bushmen work on European farms or Bantu cattle posts. A further 2,000 are practicing a mixed agricultural and hunting way of life. The remaining 6,100 lead a hunting and gathering way of life. The main concentrations of the latter are in the Central Kalahari Game Reserve (3,000) and in western Ngamiland (1,600).

The Batwa of the Lake Chrissie area have been working on European farms for nearly a century (Potgieter and Ziervogel 1955:3). The Bushmen in the Gemsbok Park are a major tourist attraction, but may do some hunting.

In Rhodesia, the Bushmen in the Wankie area are all

162 working on farms. Many of the Pandamatenga Bushmen work in
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464 Victoria Falls and Livingstone. Some have gone as far afield
648 as Lusaka and Salisbury looking for work. The Kwengo Bushmen
224 of Barotseland no longer maintain a hunting way of life.
(Clark, personal communication). Their numbers are estimated
at 200.

161 This tally of Bushmen hunter-gatherers gives a total of
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224 9,300 against an overall total of 44,100 Bushmen. Twenty
• 222 percent of the Bushmen hunting full time seems a much more
[114] reasonable proportion than Tobias' 64 percent. It is unlikely
that a change of such magnitude could have occurred between
the date of his census (1956) and the present one (1964).

162 The figure of 9,300 is nevertheless quite substantial
224
222 and indicates the remarkable persistance of the hunting-
178 gathering way of life in spite of the fact that even the most
isolated of the hunting tribes maintain close contact with
184 their European and Bantu neighbors. A large proportion of
[221] the /Gwi Bushmen of the Central Kalahari Game Reserve spend
[648] part of the dry season squatting on European farms adjacent
[312] to their area. In the north the hunting !Kung often share
[464] their waterholes with Bantu cattle herders. Most of the
[233] young !Kung men spend a year or more working as cattle herds
on a contract basis.

000 As far as is known, all Bushmen hunting today have had

101 appelation "!Kung". They said it was a term of opprobrium used of them by the Bantu.

The southern division !Kung were the first of the tribe to appear in the ethnographic literature. They are described by Baines (1864) and Chapman (1868) as "Ma'kow'kow". Later workers have called them ≠Auin (Kaufmann 1910), //kau//en (Bleek 1928), ≠Ao-//ẽin (Fourie 1928), Makaukau, and Auen (Schapera 1930). All these forms appear to be corruptions of the name ≠d"au//ae, which is currently in use among the Bushmen of the Ghanzi District. This is the Nharo name for the !Kung Bushmen; it means literally "north side" and reflects the fact that the !Kung have traditionally been the northern neighbors of the Nharo. The !Kung commonly apply this label to themselves, saying "we are the ≠d"au//ae (north side) people".

[197] [184] Since all three groups, calling themselves !Kũ, zũ/wãsi, and ≠d"au//ae, respectively, speak dialects of the same language, and since the latter two groups maintain a sense of ethnic identity through the name relation it is recommended that the name !Kung be adopted as the tribal appellation. It is the easiest of the three names to pronounce and it has had the widest currency in the literature.

[184] [224] [222] Of the three geographical divisions of !Kung, full time independent hunters and gatherers are found only among the central group.

184 The northern !Kung of Angola and Ovamboland are closely
648 associated with Bantu agriculturalists. In 1925 Bleek ob-
● 222 served that "In contradistinction to the southern !Kũ the
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439 women and children (i.e. of the Angola !Kung) are not collectors of wild food. Once or twice a year when certain berries ripen, the whole tribe goes out berry picking; otherwise they live by hunting and bartering part of the meat and skins obtained for the agricultural produce of their neighbors...." (1928:108). Westphal visited the Angola !Kung in 1964 and confirmed Bleek's observations (Westphal personal communication).

184 The southern division of !Kung work on the European
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464 farms in the Ghanzi and Gobabis districts. Many of them
648 spend the summer months in the veld, hunting and gathering, but return each year to winter on the farms (Silberbauer n.d.).

Among the central division of !Kung are found Bantu-associated peoples, farm laborers, and independent traditional hunters and gatherers. In the Grootfontein district of South West Africa several thousand central !Kung are working
131 on European farms. Along the Okavango river for 500 miles
184 of its length from Cuangar in the northwest to Sehitwa on
648 Lake Ngami, some further thousands of central !Kung live with, and work for, the Bantu of the following tribes:

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Kuangari	in South West Africa
Bunja	
Sambiu	
Djiriku	
Mbukushu	in South West Africa and B. P.
Bayei	in B. P.
Batawana	
Herero	

[621] These !Kung may live in independent villages near a
[224] Bantu kraal and devote much of their time to hunting and
[222] gathering, or they may be incorporated into the compounds of
[464] their protectors and work as domestic servants and farm hands.
However, all of these Bantu-associated !Kung are in contact
131 with groups of more independent !Kung living inland. Ties
184 of real and fictive kinship and marriage link the river
602 dwelling !Kung with the !Kung of the dry interior. The loca-
582 tion of these non-!Kung peoples is shown in Map 6, p. 34.

131 Map 7 illustrates how the European and Bantu-associated !Kung form a ring of population around the peripheries of the northwest Kalahari. These settled areas enclose an interior of about 25,000 square miles, one third of which is in Bechuanaland and two thirds in South West Africa. Most of

III. THE DOBE AREA: ITS PEOPLES AND HISTORY

131 [114] Dobe, a small waterhole on the South West Africa/Bechuanaland border, ninety miles west of Nokaneng, B.P., was the location of the author's main field camp. The term, "Dobe area", as used in this report refers to the country [312] within a thirty mile radius of the Dobe well. This includes the eleven permanent waterholes which support the entire population of Bushmen and Bantu in the Bechuanaland sector [224] of the !Kung interior. The Dobe area also includes a large [222] tract of ground in South West Africa where Bechuanaland Bushmen traditionally go to hunt and gather. It does not include the Nyae Nyae pans, /gam and Tsumkwe in South West Africa, or the more distant waterholes at n!aun!au, at !audum, or at Tsodilo Hills in Bechuanaland (see Map 8).

Dobe is not the cultural or administrative center of the settlements of the interior !Kung. On the contrary, Dobe is the most isolated of the waterholes on the Bechuanaland side. The term "Dobe area" is applied here simply as a matter of convenience.

To reach the Dobe area by truck, one drives west from the Batawana town of Nokaneng which is situated on the western edge of the Okavango swamps. After traversing uninhabited country for 67 miles the traveller arrives at

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464 [233] [162] attached to an independent camp were living with the Bantu. These working Bushmen, with their spouses and families, numbered 44 people.

The Batawana headman, Isak Utuhile, was the only one of the Bantu residents to maintain a staff of retainers and their families. This sort of benevolent feudalism is a common practice throughout the Tswana tribal areas of Bechuanaland (Schapera 1953:28; Tagart 1933) but, with this one exception, [162] is absent in the Dobe area. The headman supports four assistants (including a uniformed Bushman police constable) and their families, a total of 13 people.

Finally there was an Ad Hoc grouping of 26 !Kung who lived at the kraal of Enamoharadi, a Herero woman at Mahopa. These people lacked a territorial nucleus and therefore could [224] not be considered as an independent camp. Several !Kung [222] women helped with the domestic duties but the majority chose [262] to use Mahopa as a base of operations for hunting and gathering and to drink the milk of Enamoharadi's cattle when it was offered to them.

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648 Except for the women who are married to Bantu, most of the !Kung remain only temporarily in Bantu villages, for periods ranging from one month to two years. Also it was observed that most of the !Kung living with Bantu spent at least half the year hunting and gathering. Furthermore many

175 648 The Bushman residents of Bechuanaland, however, were not immediately affected by these restrictions. They continued to hunt and gather on the South West side and to visit their kinsmen at localities in the Nyae Nyae area.

648 The period of European presence, 1960-1965 - In 1960, the
177 South African Government put into operation its plan to civilize the !Kung Bushmen of the interior. A government station was set up at Tsumkwe where a borehole was sunk. Mr. C. V. McIntyre, the Bushman Affairs Commissioner, took up residence at Tsumkwe. The !Kung Bushmen from Nyae Nyae were
[241] ingathered and provided with rations of maize meal. After they had been settled around the borehole a program was initiated to teach them agriculture. Because of a series of drought years this program has not met with success.

[162] By 1964, over 800 !Kung Bushmen had been settled at
Tsumkwe. Less than 50 of these people had come from the
[178] Bechuanaland side. It is not clear why the Bechuanaland
[162] !Kung have not participated in this program to a greater
[224] extent, but the fact remains that over 350 !Kung continue to
[222] hunt and gather in the Dobe area and seem to indicate no
intention of moving to Tsumkwe.[1]

648 The latest development in the political situation in

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[1] Some B.P. Bushmen insist that they were refused permission to live at Tsumkwe. Others say they fear to go there.

V. SUBSISTENCE ECOLOGY: AN OVERVIEW OF PLANT AND ANIMAL RESOURCES

121 The concept of a hunting and gathering way of life has
assumed a misleading connotation in the ethnographic lite-
rature. The term has come to imply a random precarious
existence searching for food, an eking out of subsistence
[433] of odds and ends. Since the present study is the first de-
tailed analysis of the food habits of non-agricultural people,
it should be stated at once that the Bushman subsistence is
based on a systematic strategy of exploiting abundant food
222 resources. Very little of their food gathering is left to
chance. Their knowledge of the local environment, of the
habits of game and the growth phases of food plants is
virtually exhaustive. In other words, the Bushmen know
where the food is at each season of the year and they arrange
their schedule of activities to take maximum advantage of
these resources. They do not allow themselves to get into
difficult situations, and even during the season of scarcity
they have available several alternative strategies of getting
food and water.

262 The security of their life is in part due to the fact
137 that the basis of their subsistence is plant foods which are
136 abundant, local and predictable. Meat is of secondary impor-
tance in the Bushman diet. Game animals, by contrast to

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262 such as Boscia albitrunca and Bauhinia macrantha did not come into fruit in 1963-64 because of the drought. The majority were not eaten because of their unattractive taste and because more desirable foods were available.

These 85 species are listed alphabetically by class in Table 5, pp. 108-110.

The way in which the Bushmen arrange these 85 plants in order of their importance as foods suggests a productive analogy to the way they utilize space in subsistence activities.

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222 The Bushmen typically occupy a camp for a period of weeks and eat their way out of it. For instance, at a camp in the mongongo forest, the members of the camp will exhaust the nuts within a one-mile radius the first week of occupation, within a two-mile radius the second week, and within a three-mile radius the third week. The longer a group lives at a camp, the farther they must travel each day to get food. This is a feature of daily subsistence that occurs at both winter and summer camps. For instance, at the Dobe winter camp, in June the gatherers were making daily round trips of six to nine miles to reach the mongongo nuts. By August the daily round trips had increased to twelve13 miles.

This progressive increase in walking distance occurs because the Bushmen are highly selective in their food habits. They do not eat out all the food in a given area. They start

[TEXT CONTINUED ON PAGE 111]

262
222 by eating out the most desirable species and when these are exhausted they then turn to the less desirable species. Because the food resources are both varied and abundant, in any situation where the desirable foods are scarce the Bushmen have two basic alternatives in food strategy:

- first they may walk farther in order to continue to eat the more desirable species,
- or, they may remain closer to camp and exploit the less desirable food species.

For instance, at the Dobe winter camp mentioned above, by August the younger members were making the long round trip to the mongongo nuts, but the older members were exploiting foods of Classes III and IV which they had hitherto ignored and which were still abundant close to the Dobe waterhole. There was a general but not invariable tendency at each camp for the Class I and II foods to be locally exhausted first, then the Class III foods were exhausted and only then were the Class IV foods systematically gathered. One never observed the complete exhaustion of foods around a camp, because the Bushmen always moved camp long before the foods of Class IV had reached scarce levels.

These alternative strategies will be documented in later chapters. For the present one should bear in mind that !Kung subsistence always has two dimensions. There is a spatial

222 262 dimension in which the gatherers move farther and farther in order to eat the desirable foods, and a hierarchical dimension in which people remain in one area and eat their way through classes of species of decreasing desirability.

136 Animal Resources

The 223 known species of animals in the Dobe area are divided taxonomically as follows:

mammals	42 spp.
birds	75 spp.
reptiles and amphibians	24 spp.
invertebrates	82 spp.
TOTAL	223 spp.

262 825 Mammals - The mammals represent the highest percentage of animal biomass in the Dobe area and it is not surprising that the meat of mammals accounts for over 90% of the animal diet of the Bushmen. In all, 29 of the 42 mammal species are known to be eaten by the Bushmen and only seven mammal species are universally tabooed as food.

Personal, age specific, and sex specific taboos play an important role in the eating of mammals. No individual Bushman will eat all of the 29 eaten species and no two individuals have the same set of tabooed species. Each person has his own prescription of what species he may and may not eat. The mammals can be divided into seven degrees of taboos.

825
262 the animal evidently has much better storage properties than
224 the flesh.
[251]

In general, the larger the animal killed, the more widely its meat is shared. The meat of springhare, hare, steenbok, and duiker is usually consumed by the hunter's immediate family. The meat of wart hog, antbear and porcupine is [628] shared out among the members of a hunter's camp. The meat of kudu, wildebeeste and gemsbok is shared out among the hunter's camp and among members of neighboring camps.

825 Birds - The eating of birds again illustrates the selective
262 food tastes of the Bushmen. Of the 75 species of birds
223 recorded only eight species were said to be eaten and of these only four species were observed to be systematically hunted. The four important game birds were:

crowned quinea fowl
Swainson's francolin
red-billed francolin
red-crested korhaan

The other birds eaten were:

Kori bustard
Cape turtledove
double-banded sandgrouse
red-billed teal

Snares were regularly set in order to capture guinea fowl, francolin and korhaan. Occasionally other birds triggered the snares. Usually these other species were fed to the dogs. Occasionally they were simply discarded.

222 Only the eggs of the above eight species appeared to be
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gathered and eaten. With one exception all other birds eggs were ignored. The exception was the ostrich eggs which were highly prized as water containers and as material for making ostrich egg shell beads.

Reptiles and Amphibians

Only four species of reptile - two tortoises, one leguaan, and the rock python - were regarded by the Bushmen as edible. One species of frog, Pixiecephalus sp. was regarded as edible. Of these five species, the large leopard tortoise (Geochelone pardalis) is the most important food. These tortoises weigh 5-8 pounds....s. They are sluggish and easily collected. For this reason, the tortoises were the only species of vertebrate that were collected by the women. All other vertebrates were the exclusive concern of the men.

The rock python, a large non-poisonous snake, was regularly collected by the men. This provided c. 25 lbs. of meat per specimen. The pythons collected varied in length from 8-15 feet. The other three species were rarely observed to be eaten.

Invertebrates

Insects have traditionally been considered by ethnographers to be a major Bushman food (Bodenheimer 1951:137-195). However, among the Bushmen of the Dobe area insects played a minor role in the diet. One species of antlion and three

222 262 [825] species of beetles were observed to be eaten. Termites and locusts were not eaten. Honey is highly regarded as food by the Bushmen, and the hunters often investigated bees nests but honey was never observed to be eaten at the Dobe camp and only rarely at other camps.

262 824 825 In summary the plant and animal resources of the Dobe area include 85 plant and 54 animal species which are eaten. Closer examination reveals that only a small number of these edible species play a major role in the diet. Only 26 of the 139 edible species may be considered as major Bushman foods: 9 species of plants and 17 species of animals.

VI. ORGANIZATION AND TECHNOLOGY OF SUBSISTENCE

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462 There is a basic division of labor between the sexes: the men are hunters of game and the women gatherers of plant foods. The men, however, do combine gathering with hunting. For instance, if no game has been killed on a hunt the men will gather some vegetable food as they return at the end of the day so that they will not come home empty-handed. The organization of work is simple. The sexes are almost always segregated in food-getting activities. Typically the women of a camp will go out in groups of three to five, with a well-defined objective of which species they want to collect. They spend thd day or part of it working over an area and return to the camp each evening with their food. They never remain out overnight.

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462 The hunting groups of the men are smaller than the collecting groups of women. Typically two men will go out hunting together, but frequently an individual will go hunting alone. More rarely groups of three or four men go out. Hunting groups of five or more men were never observed during the study period. The Bushmen feel that too many participants spoil the hunt. The men very rarely stay out overnight. Even if they have shot an antelope in the afternoon they return to the main camp to sleep and early the next morning set out to

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462 track the animal to the place where it has died. All the [222] Dobe area Bushmen consistently hunted and collected within a 15-20 mile radius of their camps. Hunting trips of 3-10 days duration have been recorded in the literature on !Kung (e.g. L. Marshall 1960:331), but these extended trips were not a feature in the Dobe area.

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462 The contrast in technology between the hunting equipment of the men and the gathering equipment of the women is striking. Only three elementary tools are required for the complete range of gathering tasks. On the other hand, the hunting kits consist of at least 19 complex weapons and devices, with sophisticated methods of manufacture and maintenance.

222 The three gathering tools are the kaross, the digging stick and the nut-cracking stones. With only these three items, a softened antelope hide, a sharpened stick, and a pair of unimproved rocks, the entire gamut of plant foods [291] can be exploited. The kaross is the most important of the three. This is a one-piece combination garment-cum-carrying-device made from the hide of a gemsbok, kudu or wildebeeste. [281] The raw hide is dried, the edges are trimmed and the hide is softened by a tanning agent from the plant Elephantorhiza burkei. The resulting garment is worn by the women draped [482] over the back. When tied at the waist by a leather thong,
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482 the lower half of the kaross conceals the wearer's backside
[291] while the upper half forms a pouch for carrying vegetable foods (as well as water containers, firewood and babies).

Since most of the Bushman foods are nuts and berries, ranging in size from 1/2 to 1-1/2 inches in diameter, and hundreds of these small foods make up a family's daily diet, Bushman life would not be possible without some means of carrying quantities of these small foods back to the camp or "home base". One cannot overstate the importance of the food-carrying device for Bushman life, and for the life of hunting and gathering peoples in general. This, I think, has implications for the evolution of human subsistence during the Pleistocene since a device for carrying vegetable foods would seem to be a prerequisite for human camp life.

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412 The digging stick is secondary in importance to the kaross because all but one of the major Bushman foods are nuts, berries and melons which do not have to be dug out of the ground. The typical digging stick is three feet long, three quarters of an inch in diameter and sharpened into a blade at one end. It is made from the thick straight stalks of the bushes of the genera Dichrostachys and Grewia. It
[224] is not weighted by a bored stone. Apart from its obvious use for digging out edible roots and bulbs, the digging stick also plays an important role in mens' hunting activities.

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412 Four of the ten important game species (wart hog, antbear, porcupine, and springhare) live in underground burrows and it is often necessary after running an animal to ground for the hunter to excavate to the burrow in order to retrieve the [482] carcass. The men also use the digging stick as a carrying yoke on which to bring home game.

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222 The third tool is a pair of nut-cracking stones. Without these it would be impossible to exploit the abundant mongongo nut (Ricinodendron) as food because of its extremely hard shell. Any reasonably hard stone may be used including the locally abundant limestone cobbles. The hammerstone is fist-sized and no flakes are struck off. The anvil stone may be any size and shape up to a weight of fifteen pounds. Neither of these stones is improved in any way and only the pecking marks show evidence of human use. The nut is held on the anvil stone between the fingertips of the left hand. With the hammerstone one delivers two to five sharp and dextrous blows which are sufficient to open the nut.

Through the generations, pairs of these stones have become distributed throughout the nut forests of the Dobe area. It is only occasionally necessary for a woman to carry her own cracking stones from one camp to another.

It may be useful to re-examine the Stone Age lithic assemblages with the nut-cracking stones in mind.

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224 Also, on occasion, the men scavenge meat from carnivore kills. If the day's hunt has been unsuccessful a man may hack a piece of dried hide from a kill that may be several weeks old. Or, if several men are hunting together they may drive the lesser scavengers such as vultures and hyenas off a fresh kill. Scavenging is not a regular practice. It occurs only if the opportunity presents itself and if there is no other meat forthcoming.

VII. LAND UTILIZATION

361 During 1963-64, the Dobe area was divided into nine territories within which the 15 independent camps were operating. These nine territories together covered about two-thirds of the total area (see Map 14).

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312 There was not a direct relationship between the number of permanent waterholes, the number of territories and the number of independent groups. Although all of the independent groups had access to a permanent water, some of the permanent waters supported several groups, while at other permanent waters independent groups were lacking.

The number of territories and number of groups at each waterhole is shown in Table 6.

[222] At !gośe there were four camps but all these camps moved within the same collecting areas. Similarly, for part of the time, there were two camps at Dobe but both camps utilized the same groves of nut trees and the same summer waterholes.

On the other hand, at /ai/ai three of the five camps had their own territories, while two of the camps shared a territory. The jointly occupied territory lay to the north of the /ai/ai waterhole, and the three other camps operated to the west, to the south, and to the east of /ai/ai, respectively.

At the !angwa, Bate, and !ubi waterholes, the situation

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361 312 was simple. Each waterhole supported one independent camp and each camp had its own territory.

Two of the waterholes, Mahopa and !xabe, lacked independent camps and therefore were not part of a territory.
[648] The Bushmen who drank at these waterholes lived in Bantu
[222] villages. They collected food in the adjacent territories of other camps such as Dobe !ubi and !angwa (see Map 14).

361 602 The sharing of a single territory by two or more camps reflected the close kinship ties between the camps. This was obvious at Dobe where the leaders of the two camps were a brother and sister who often brought their two groups
[562] together to make a common camp. It was also obvious at !goše where the four camps were led by descendants and collaterals of one old woman. In previous years these four independent groups at !goše had lived in one large camp.

361 The territorial arrangements of the Dobe area !Kung Bushmen, like their group structures, were extremely flexible. Most territories overlapped with one or more adjacent territories. The boundaries of territories were vaguely defined and there were areas between territories which were not claimed by any of the camps. The Bushmen did not conceive of territories as areas of exclusive occupation. The concept of territorial defense was lacking. Each territory consisted, in the words of Mrs. Marshall, of "a waterhole and a side" (L. Marshall 1960:334). This point is illustrated in Map 14.

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312 Each of the groups moves in a "direction" from its waterhole. For instance, the Dobe people move to the west and north, the !angwa people move to the northwest, and the !gose people move to the east.

361 The concept of territoriality as applied to the Bushmen differs from the concept used by zoologists in discussing the spatial arrangements of animals. The zoological usage refers to the exclusive use of space, by an organism or group of organisms who defend this space against competing members of the same species (Bourliere 1964:94-100).

By contrast the Bushmen groups do not defend boundaries and members of all groups travel freely between camps. However, land utilization is not at all a random phenomenon. [222] [224] The Bushmen population is organized into land-holding units, and the members of a unit tend to spend the greater part of the year hunting and gathering within a specific area.

Thus, in the context of this study, the term "territory" refers to the area within which an independent camp moves during the annual subsistence cycle.

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[312] The locations and spatial configurations of territories are determined by the distribution of water and food resources. Each territory has within it a permanent waterhole, one or more seasonal water sources, and one or more mongongo nut forests. Every territory includes, in addition, a selection

312 221 433 824 permanent water sources. Nevertheless for one season every year Bushmen must face a situation in which major foods and permanent water are a considerable distance apart. How Bushmen arrange their lives to meet this situation will be illustrated by data from the Dobe area !Kung Bushmen.

312 824 222 According to the Bushmen, water has always existed in the eight permanent waterholes of the Dobe area. Seven of these waterholes are situated in or near the dry bed of one molapo, the !angwadum. The eighth, 25 miles to the south, is in the bed of another molapo, the /ai/aidum. These molapos lie in the center of a belt of flatlands which varies in width from 5-10 miles. It was pointed out in Chapter IV that the molapos interrupt the basic system of parallel dunes that cover most of the northwestern Kalahari. But it is only on these dunes that the primary Bushman food, the mongongo nut, is found. The result is that each of the eight waterholes is three to seven miles distant from the nearest grove of mongongo nuts. Thus gatherers who are camped at a permanent water must make a minimum daily round trip of six to fourteen miles in order to gather mongongo nuts. As the nearest nuts become exhausted the round trip distance becomes greater and greater, until it reaches a distance that is too far to walk in a day. This distance varies from camp to camp but 12 miles (6 miles out and 6 miles returning) was close to the maximum that the

312 824 222 people were willing to walk in a single day for the purpose of food gathering. In order to exploit food resources further than seven miles from water, the Bushmen feel that it is necessary to make a temporary camp at the food and stay overnight.

312 222 The options available to Bushmen facing such a situation are three: 1) they may carry water to the food and live there until their water is exhausted; 2) they may move to the food and dig water-~~rich~~ roots to satisfy their moisture requirements; or 3) they may wait until rainfall produces standing water nearer the desirable foods.

312 147 There are no physiological short cuts to solving the water problem. There is no evidence that the Bushmen's daily water requirements are less than that of other peoples (Wyndham in press; Silberbauer 1965). Like all peoples, the Bushmen must drink water to live and their daily requirements are a function of such factors as ambient air temperature, wind velocity and the work they have to do[1] (Ladell 1958; Adolph et al. 1947).

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[1] Ladell, a physiologist specializing in problems of human life in arid regions has said: "It can be categorically stated that no man of any race, however acclimatized and trained, can survive in a hot desert climate without very liberal supplies of water; there is, and can be, no substitute for water and there is no remedy for its deficiency". (1958:85).

312 at the waterholes consists primarily of roots and bulbs of the
221 genera: Eulophia, Vigna, Walleria, and Coccinia, and the edible
824 sap of Acacia spp. and Terminalia sericea. It is this time of year that the heart of the dwarf vegetable ivory palm is eaten,
[1164] (Hyphaene). Those who eat its fibrous pulp experience stomach cramps and diarrhea, but, as the Bushmen say, it make one's "mouth work" and gives one a sensation of a full stomach.
221 Hunting is arduous business in the heat and men who go out in
224 the early morning find it necessary to spend the mid-day hours resting in the shade. The principal animal killed is the springhare.

132 The first rains are convectional thundershowers. Their distribution is spotty. A storm may briefly inundate one area and miss entirely another area only a mile away.

312 The Bushmen observe the storm clouds travelling across
222 the horizon and try to judge where the showers have drenched
[821] the ground. They then set out in family groups in the direction of the rains. If they find that water has collected in the hollows of mongongo trees, they will stay in the nut groves for several days and eat nuts until the water is exhausted. They then fill their karosses with nuts and return to the permanent water. If, on reaching the nut groves, they find that no water has collected they will be forced to fill their karosses with nuts and return to camp the same day. In certain areas

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222 where the water bearing root Fockea monroi is available the Bushmen may extend their stay in the nutting groves by eating the juicy pulp of this root. If they are fortunate, this water source may tide them over to the next shower, part of which will accumulate in the hollows of trees.

13 The first rainfall, however brief, appears to have the general effect of triggering reproduction in animals, and initiating the growth phase in plants. Among the first of the summer foods to appear are the leafy greens Dipcadi glaucum and Talinum crispatulatum.

132 There is no well-defined boundary between the first rains of October and the main rains. J. Marshall mentions that during his periods of field work a gap occurred between the first and the main rains. In 1963 and 1964, however, the showers gradually increased in intensity and frequency from [433] October through December. The date of onset and the intensity of rainfall varies greatly from year to year and a delay of even a few weeks in the onset of rain can cause considerable hardship amongst the Bushmen. Furthermore, an initial rain followed by weeks of dry weather is a mixed blessing, for it brings the plants prematurely into leaf and they become scorched and damaged by the subsequent sunshine.

In 1963, the first rain fell on 8 October. In 1964, it did not fall until the 11 November and one noticed that the

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433 physical condition of the Bushmen was visibly poorer in November 1964 by comparison with November 1963.

2. Main rains

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[821] The Bushmen say that a series of intense downpours (measuring 2-3 inches) heralds the beginning of the main rains and ushers in their season of abundance. Such a fall occurred in 1963 at the end of November. The immediate effect of these downpours is to produce standing water in the small molapos that lie in the interstices of the dunes. When these seasonal waters become established, virtually the entire Bushman population moves out to live at them. Thus from December through March the permanent waterholes are largely deserted.

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• 222 With the coming of the main rains, the summer foods begin to ripen. These foods appear around the summer water sources and they appear also around the permanent waterholes. It is significant, that, although foods become available at the permanent waterholes, the Bushmen tend to avoid these foods. They prefer to eat the foods that are around the summer waters. This illustrates one way that the Bushmen take maximum advantage of the more distant foods. They defer exploitation of the foods around the permanent waterhole until the winter when the alternative water sources have dried out.

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[162] 30 or more people) and Bantu cattle posts. These were located at Characharaha, Mahito, !gun≠isa and /wihabe. Map 18 illustrates the distribution of population during the late summer (March 1964).p. 159.

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222 Life at the summer pans is, by Bushman standards, luxurious because all of the major and minor fruits, berries, melons and leafy greens become available. There is a succession of ripening of the major foods throughout the summer months. The first to ripen are the leafy greens (Dipcadi and Talinum), followed by the sour plums (Ximenia caffra and X. americana), then the melons (Citrullus lanatus and C. naudinianus), and the Grewia berries (Grewia flava comes first followed by six other species). By the time the plums have become scarce the melons are ready for eating. As the melons become worked out the Grewia berries ripen. Each of six species of Grewia comes into ripeness at a different time, so that every two weeks throughout the middle of summer another species of Grewia became ready for eating. Throughout the early part of the summer the mongongo nuts are available but these are the nuts from the previous year's fall. It is not until April that the current year's fall of nuts occurs. And then a new cycle of working out from the camp occurs. This illustrates again the selective gathering habits of the !Kung Bushmen.

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222 Citrullus lanatus - the well-known "tsamma" melon was one of the superabundant foods. It was intensively exploited throughout the mid-summer until it was exhausted within a radius of five miles of the !Gausa Pan. This is a remarkably successful plant around the areas of human habitation. It is an annual (Story 1964:20) and will sprout from seed wherever the pips have been discarded. It is interesting that the Bushmen do not consider cultivating this melon, a common practice among the neighboring Bantu.

Grewia flava berries were superabundant in the vicinity of !Gausa and Characharaha. The amount a woman could bring home was limited only by the speed at which she could pick them from the five-foot tall bushes. In addition, six other species of Grewia were locally available: (G. bicolor, G. flavescens, G. avellana, G. falcistipulata, G. retinervis, and G. subspathulata). It is interesting that, because G. flava has the tastiest berry of all the Grewias, the other six species were largely ignored until the G. flava had been exhausted within a six mile radius of !Gausa.

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262 When the new crop of mongongo nuts fall~~s~~, the gatherers can ignore the ~~previous year's crop~~. The mongongo nut has two edible portions: an outer fruit and an inner kernel. Figure 3 on page 161 shows a mongongo nut in cross section magnified four times to show detail. The outer layer of skin

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146 totalling 36 lbs. This meat (490 lbs.) went to feed a camp of 42 people (exclusive of visitors).

A rough calculation of the weight of meat per person per day through this 28-day period gives a figure of 6-2/3 oz. of meat. The daily intake of vegetable foods per person during the same period can be estimated at 24 oz. (of mongongo nuts and various roots). Therefore a reasonable estimate of the ratio of meat to vegetables in the diet of this camp is 25%-75%.

This ratio is based on observations at one camp during [114] one season only. It can be said, however, that George Silberbauer, Laurence and Lorna Marshall, and the author are in general agreement that meat comprises between 20% and 40% by weight of the Bushman diet (Silberbauer, 1965:28; Marshalls, personal communication).

5. Late Winter

221 There is a well-defined break point in the winter subsistence cycle between the early period (May, June and July) of relative abundance and the late winter and spring period 221 of increasing food scarcity (August-September). Through the 222 early winter the Bushmen concentrate on the mongongo nut groves 462 that are within a day's walk of permanent water. Groups of women go out once every three or four days, fill their karosses with nuts and return to the camp in the evening. The men

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222 during this period concentrate on tending their snarelines.
[462] Gradually the distance to the nuts increases as a wider and
[224] wider radius of nuts becomes eaten out. For instance, by the end of July there were no nuts within seven miles of the Dobe waterhole, and a day's collecting became a major undertaking. In order to reach the nuts, the women had to set out early in the morning and walk for 2-1/2 hours. In the nut forest they had to work for two hours to fill their karosses
[482] with nuts. On the return journey each woman was heavily loaded with c. 30 lbs. of whole nuts and the distance back to camp took 3-1/2 hours to cover. Thus on a late July collecting trip, the women would have to walk at least 14 miles to and from the nuts, plus another two miles in the nut forests, stooping and collecting. This adds up to eight hours of hard work in one day.

At this point, the effort required to gather mongongo nuts begins to outweigh the satisfaction derived from eating nuts and one observed a sharp decline in nut collecting in favor of the less desirable foods of classes II, III and IV. These latter foods had the advantage of being locally abundant in the vicinity of the permanent waterholes.

This transition from nuts to other foods occurred at Dobe
[184] at the end of July (in 1964). At :gose, where the nut forests are much denser, the gatherers continued their daily trips

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222 184 well into September. On the other hand, at /ai/ai, where 109 Bushmen were living, the local mongongo nuts were exhausted at the beginning of July.

Since each territory was known for a different selection of winter foods, the transition took a different form at each waterhole. At Dobe, the mongongo nuts were replaced as the staple of the diet by Baobab fruits (*Adansonia*) and vegetable ivory palm hearts (*Hyphaene*). At Bate the people shifted from mongongo nuts to *Sclerocarya caffra* nuts. At !angwa, the people concentrated on collecting *Acacia* spp. gums.

221 824 146 In general the diet of the Bushmen becomes much more eclectic during the latter half of the winter. It was during this season that the Bushmen took advantage of a wide selection of edible species. Instead of eating mongongo nuts with a few other species as "side dishes", the people had to diversify their diet in order to live well. During August and September no less than 25 species of roots, bulbs and edible gums formed the basis of the diet.

222 312 There was an alternative strategy to eating less desirable foods. If a family was prepared to make the effort required to reach the nutting groves, they would fill their water containers (ostrich egg shells and the stomachs of antelope) and walk to the nuts. They would collect and eat there until

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their water was exhausted. Water could only be carried out in sufficient quantities to support a family for two or three nights, so that at noon of the third or fourth day, a family was forced to return home.

312 The ability of a group to live away from a waterhole is strictly limited by its capacity for hauling water. The ostrich egg shell has an average capacity of 36 ounces (U.S.).[1] The contents of two eggs (72 ounces or 2-1/4 quarts U.S.) supplies the minimum daily fluid requirements of one adult. Bushmen informants consistently spoke of two eggs-ful as their minimum daily ration. When well-water was available, the Bushmen were observed to drink more than 72 ounces per day. Irven DeVore made a four-day study of the water intake of a group of 15 people in November, 1964. During this period he provided (from water drums) all the water that was drunk by a party of 15, including seven adults and eight children.

His observations are set out below:

1. Total water given out during a 72 hour period: 2,812 oz.
2. Average per 24 hour period: 937 oz.

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[136] [1] The Kalahari ostrich egg shell is smaller than that of other areas. The mean capacity of four eggs from the Dobe area is 35.8 ounces (U.S.). (The range of capacities is 33.5, 35, 35.5, and 39.5 ounces.) This compares with an egg from the Cape Province with a capacity of 42 ounces, and an egg from Kenya with a capacity of 46 ounces.

312 3. Average quantity of water provided to each adult per 24 hour period; 85 oz.

4. Average quantity of water provided to each child per 24 hour period; 43 oz.

Since the amount of water loss through sweat varies directly with the air temperature, an individual would require more than two eggs-full of water during the summer when the mean daily maximum temperature is 100°F. During the winter, when the mean daily maximum is 85°F, two eggs-full appear to be sufficient.

Similarly, the amount of water loss through sweat varies directly with the intensity of activity, so that an individual would require more water after a day of hard hiking in the sun than he would after a day of comparative inactivity in the shade of the nut forests.

For the present case (winter nut collecting trips) the two-egg figures will be taken as an average.

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For every day of residence away from the permanent water, an individual must carry with him, 72 ounces of water. Therefore a person on a three day collecting trip must carry out four eggshells of water: one for the afternoon of the first day, two for the second day and one for the morning of the third day. Children under 10 years of age can manage on one egg shell of water per full day. Therefore, if a man and wife

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484 with three young children go to the nuts they must carry a 222 minimum of 4+4+2+2+2 = 14 ostrich egg shells filled with water, four for each adult and two for each child. However, most [426] women own only about six shells. By borrowing shells from other camp members they can bring the total up to the number required for a three day trip.

The antelope stomach sacs offer an increase in water-carrying capacity. A fresh sac will hold up to one gallon (U.S.), i.e. 128 ounces of water, which is the equivalent of 3-1/2 egg shells. Therefore, if a family of five owns two stomach sacs containing 256 ounces of water, this will provide them with one day's supply of water. The 14 egg shells hold three day's supply of water, so that, with two stomach sacs and 14 shells, the family of five can stay an extra day (three nights instead of two) away from the permanent waterhole.

Four days is the upper limit on the time that Bushmen can spend away from a waterhole without a supplement of water from plant sources. There are three reasons for setting the upper limit at four days. First, there is a limit to the number of containers available. Stomach sacs are very fragile and have a short useful life. As they rip they are sewn and this sewing makes their capacity smaller and smaller, so that after six months or so they are discarded. Ostrich egg shells, on the other hand, are much more durable

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[426] and may stay in constant use for years. It is curious therefore that each family possesses less than 10 shells and must borrow shells in order to make these hiking trips to the nuts. The limited number of containers is probably the reason why members of a camp go out to the nuts in shifts. When one family returns, the camp's ostrich egg shells are pooled, and then another family may go out.

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[855] A second limitation is the weight of water that can be carried. The 756 ounces of water required for four days at the nut forest weigh 47 lbs. Each empty ostrich egg shell weighs eight ounces; so that the 14 shells themselves weigh an additional seven lbs. Furthermore it is necessary for the parents to carry the younger children on their shoulders. So, in effect, the parents must walk out to the nut forests fully loaded with water and children and also return fully loaded with nuts and children. On the return trip the weight of the water is replaced by an equivalent weight of collected nuts.

The third limitation is set by the volume that the ostrich egg shells occupy in the carrying space of the kaross. The volume occupied by 14 ostrich egg shells is roughly equivalent to the volume occupied by 14 quart-sized milk bottles. When the time comes for the trip home the adults must pack into each kaross 20 lbs. of nuts, as well as the empty ostrich egg

312 shells; this makes for a very bulky and unwieldy parcel. The
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● 222 stomach sacs, by contrast to the egg shells, have the distinct
advantage of being weightless and occupying no space on the
return trip, since when they are empty they dry and shrivel
up.

221 The reader can now appreciate the complex logistics of
222 Bushman subsistence activities during the late winter dry
312 season. In view of the difficulty of collecting mongongo nuts
during this season, it is not surprising that the people turn
to an eclectic diet of roots, bulbs, and gums that are still
available in the vicinity of permanent water.

222 Several variations in tactics were observed among the
484 Dobe area Bushmen. One such variation was to leave the older
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312 children behind in the care of relatives while the parents
482 made the long trips to the nut forests. By leaving behind
two children at the main camp, the parents could effect
savings of 30% in the weight of water that had to be carried
out on a four day trip.

222 Another variation observed was the two-day-one-night
484 overnight hike. Such a trip lasted only 36 hours and required
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[482] only three ostrich egg shells of water per adult. By using
this tactic, groups of ten or more people could make a rapid
lightly loaded trip to the nut forests and return the following
day heavily loaded with nuts. This was a difficult operation

222 312 482 484 because it entailed two consecutive days of hardhiking on short water rations. The object of such a trip was to get to the nuts and back again as quickly as possible, before the physiological deficit of water was allowed to reduce efficiency.

221 222 262 The general object of the winter nutting trips was to remain at the nut forests just long enough to eat a really substantial quantity of nuts (about 400 nuts per adult). This marathon meal starts the moment that the Bushmen arrive at the nut camps and continues throughout their stay. It is interrupted for short periods when the Bushmen go out to [539] collect nuts in the vicinity of their temporary camp. There is a Bushman saying that aptly applies to this situation: "It is better to carry food home in your stomach than on your back."

[224] Hunting rarely occurs at these overnight camps. The efforts of men and women alike are directed to eating as many nuts as possible in a short time.

[312] The most important variation in the late winter and spring subsistence tactics centers on the use of Fockea monroi as a source of water. This will be discussed below.

132 6. Early Spring

August is the last month of winter. The last of the freezing nights occurs at the first of the month and these are followed by warmer nights in the 40's and 50's and daily

132 highs in the 90's. The warmer weather heralds the onset of
312 spring which is the most difficult season of the year. Most
137 of the waterholes have no mongongo nuts within a ten mile
222 radius. The alternative foods, roots and bulbs, are being
collected daily by some of the people, while others are
making the long overnight journeys to the nut forests.

221 Since territories vary in the abundance of early spring
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628 foods there was a noticeable tendency for families to visit
other camps. For instance in September, Bate still had a good supply of *Sclerocarya caffra*, nuts; and several families from Dobe, Mahopa, and ;angwa converged upon Bate to eat these nuts. Similarly !ubi had a supply of Baobab fruits (*Adansonia digititata*) and other families made extended visits to relatives there. The maintenance of close ties between camps made possible a more equitable distribution of foodstuffs, so that, if there was scarcity at one camp, and food at another, the members of the first camp would not go hungry. This is one of the highly adaptive features of the fluidity of !Kung group structure.

[563] Some families fall back on the Herero villages at this
[431] time of year to beg for milk. This occurs especially among
those people who have a sister or cousin married to a Bantu man. Both the Bushman and Herero codes of good manners demand that visiting in-laws be fed (L. Marshall 1961).

251 were roasted in the coals of the fire and then pounded to
252 the consistency of coarse meal in the wooden mortar. This
262 roasted hide had the taste and texture of crisp crackling and was delicious when pounded and mixed with the flesh of roots of the genera Coccinia, Walleria and Eulophia. These stores of dried hide and meat did not serve as a staple surplus so much as an emergency delicacy to brighten the diet when a day's hunting had been unsuccessful.

221 The major food strategy during the hot dry spring was
222 the 7-14 day trip to the waterless country where mongongo nuts
312 were still plentiful. At these camps the only source of
361 water was the juice from the roots of Fockea monroi. Fockea
824 has an uneven distribution in the Dobe area. The Bushmen must camp in a nut forest that is in close proximity to patches of Fockea. The maximum period that a group was observed to live on Fockea roots was two weeks. The limitation is set by the density of Fockea plants in an area, and the amount of fluid that each plant holds. Life at the Fockea patches is difficult because people have to work hard to obtain water as well as food. Each Fockea root storage organ contains 8-16 ounces of recoverable moisture. Thus a daily ration of 72 ounces of water can be obtained by digging out 5-10 Fockea roots.

312 But the dilemma of living on Fockea lies in the fact that
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222 a great deal of energy must be expended in digging out these roots, and the concomitant of this expenditure of energy is a much greater fluid loss through sweating.

It was mentioned earlier that the body's daily water loss is in part a function of the intensity of activity. For instance, an individual who is resting in the shade will lose half the water that is lost by another individual who is walking in the sun.[1] When standing water is available, the amount of energy expended in obtaining water is small. An individual walks a few hundred yards from his camp to the waterhole, drinks his fill there, then fills his water containers and walks back to the shade of his camp. On the other hand, an individual who is living on Fockea roots must walk several miles per day in the sun and must dig out a number of large roots that are buried 12-18 inches deep in the hard soil of the molapos. Therefore an individual who drinks Fockea juice must first replace the considerable quantity of water that is lost through the effort of searching and digging the Fockea roots; this is in addition to the water that is lost in the course of normal daily activities such as hunting, food gathering and resting.

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[1] Adolph and associates (1947) present detailed analyses of this and other factors in sweat production.

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222 The net effect of this effort is that an individual must drink much more than the minimum daily requirement of 72 ounces of water. In fact, men who were living on Fockea roots, were observed to dig out between 15 and 20 of the roots per day. The quantity of water provided by these roots is estimated at 150-300 ounces, part of which went to provide water for the children of the camp.

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312 A description of one Fockea trip, in which the author participated, will serve to illustrate some of the difficulties of living away from standing water.

[123] This trip began on 6 November and ended on 16 November, 1964. The group consisted of 12 Bushmen (plus the author); there were three men, four women, and five children. One of the young women gave birth during her stay so the returning group consisted of 13 Bushmen.

November 6 - This group (minus one of the men who came out the following day) set out from the Dobe waterhole at 10:00 [103] a.m. They spent the day walking to a nut forest named !wi/wama which was situated eleven miles west of Dobe. The original plan was to remain there for five days.

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[843] The pace was leisurely to suit the three older children (ages 12, 8, 6 respectively) who went on foot and the young woman who was in the terminal month of her pregnancy. On the way we stopped at intervals to eat seven different species of

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food plants and to rest in the shade. Towards evening we reached a patch of Fockea roots and spent an hour digging and eating them. Six roots were divided among our group of 12 people. At seven p.m. we made camp in the mongongo nut forests at !wi/wama. Within minutes of our arrival the four women had collected and were cracking mongongo nuts.

Before leaving Dobe, the Bushmen had filled 15 containers with water:

1 kudu stomach sac	4 quarts
2 enamel buckets	4 quarts
12 ostrich egg shells	13-1/2 quarts
Total water carried:	21-1/2 quarts (= c. 700 oz. or water)

On the outward journey, the 12 of us drank four of the ostrich egg shells which had been filled at the Dobe well, plus an estimated two quarts of water from Fockea roots. During the evening, no one drank water until just before bedtime when a further three quarts of water were divided out. Therefore, of the estimated total of 700 ounces of well water, 224 ounces (30%) had been consumed on the first day's hike. It is not known how long the remainder lasted because the author left the camp at the end of the second day.

November 7 - The group woke up at 5:40 a.m. The women were not satisfied with the location of the camp so we packed up and hiked west for another half mile to make camp at a new

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484 location closer to the nuts. By 7:00 a.m. this camp had been
312 deserted. The women and their children had gone to collect
[462] nuts and the men had set out to find Fockea roots and to hunt
[224] along the way. The men carried no water with them on the hunt. The author accompanied the men.

We walked south for several miles looking for fresh animal tracks and for patches of Fockea plants. We passed through two molapos where the Fockea plants were likely to exist, but to our disappointment we found none. It was 10:00 a.m. before we dug out the first Fockea of the day.
[132] By this time the morning coolness had disappeared and we had to walk and dig in the sun with shade temperatures about
312 100°F. The first Fockea worth digging were found 4-1/2 miles
824 south of our camp at !wi/wama. The roots were the size of a football and weighed about three pounds.

The flesh of Fockea is white and juicy with a spongy granular texture. The juice is milky in color and slightly astringent so that it smarts when accidentally rubbed into small cuts on the hands. There are two methods of extracting the moisture from the root. First, one cuts open the root with a knife and chops off chunks of the flesh inside. This may be eaten directly like watermelon. The disadvantage of this method is that one must swallow about three pounds of roughage in order to extract one pint of moisture; in other

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224 No game were seen except for a solitary female ostrich. We
222 tracked her to her nest and collected her clutch of nine eggs. Each of the eggs was pounded in the sand to separate the amnion from the inside of the shell. This apparently kills the embryo inside the egg. These nine eggs were divided among the three of us. We then dug out four large Fockea roots intact, and we returned to the camp at 2:30 p.m. after a hike of nine miles.

484 The women of the camp had spent the early part of the
222 morning collecting nuts and Fockea and the rest of the day
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312 sitting in the shade cracking nuts and squeezing the Fockea juice. From 2:30 to 4:30 p.m. no one drank any of the water that had been brought the previous day.

484 At 4:30 p.m. the third man of the camp arrived from Dobe.
312 He brought with him one gallon of water in an enamel milk pail and portions of a dead kudu that he had scavenged from a carnivore kill on the way.

484 By this time I was experiencing symptoms of heat dis-
123 tress, (fever, lassitude, inability to swallow) and decided
312 to return to Dobe, because my continued presence would become a burden on the camp residents, none of whom, incidentally, showed any signs of heat discomfort.

One of the men, seeing my condition, offered to accompany me back to Dobe with his family. We left at sunset and walked

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824 allows for a wide range of alternatives in subsistence
433 strategy. During the summer months the Bushmen have no prob-
824 lem other than to choose among the tastiest and most easily
221 collected foods; other species which are quite edible but less attractive are simply bypassed, so that gathering never exhausts all the available foods of an area.

During the dry season, when the fruits and melons have gone, the gatherers still have multiple options open to them. They may plan a hike to the molapos to collect the edible Acacia gums, or they may go to the flats to dig out roots and bulbs. Even at the end of the dry season, when the stronger members of a group are making the long hikes to the mongongo forests, the older, less mobile members can derive an adequate subsistence from an eclectic diet of minor foods which are closer to home.

433 Plants versus Game -- The security of Bushman subsistence
222 derives in part from the fact that meat is of secondary import-
224 ance to vegetables in the diet. The !Kung males are persistent, but not particularly successful hunters. Although hunting accounts for over half of the subsistence effort of a camp, meat comprises only 20-40 per cent of the diet. The basis of the Bushman diet is plant food, and meat has come to be regarded as a special treat. When meat is available, it is welcomed as a break from the routine of vegetable foods, but it is never

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224 depended upon as a staple. Strictly speaking, the Bushmen should therefore be regarded as gatherer-hunters rather than hunter-gatherers.

The relative scarcity of game in the Dobe area may be related to the widespread diminution of the large African mammals during historic times. It is worth noting, however, that this diminution of game has not led to the collapse of the Bushman way of life. It is sometimes asserted that the decline of large game has contributed to the extinction of hunting-and-gathering peoples in Africa and elswhere. The evidence from the Dobe area refutes this assertion. The Bushmen there have elaborate and sophisticated methods for capturing smaller mammals, and the meat from these kills serves to supplement a diet primarily based on abundant plant resources. The burden of the evidence from this study suggests that the Dobe area Bushmen do not lead an impoverished way of life.

262 Diet Selectivity -- If the Bushmen were living close to the starvation level, then one would expect them to exploit every available source of nutrition. That their life is well above this level is indicated by the fact that, in a given season, they eat only the most attractive of the vegetable foods, and bypass many other available foods. In their meat eating habits the Bushmen show a similar selectivity. Only a few of the dozens of edible species of small mammals, birds, reptiles, and

262 insects that occur locally are regarded as food. Such animals as rodents, snakes, lizards, termites, and grasshoppers, which, in the literature, are included in the Bushman dietary, are despised by the Bushmen of the Dobe area. Even the more attractive larger mammals are hedged round by numerous age-specific, sex-specific, and personal taboos, so that no single Bushman may eat all of the thirty species of mammal that are considered edible. Ritual curers prescribe, for each individual, a series of species that would be highly injurious if the individual were to eat them. These prohibitions are strictly observed. For instance, the wife of ≠oma, the most successful wart-hog hunter, was forbidden to eat the meat of that species and she became sick to her stomach at the mere smell of cooking wart-hog meat. Such strongly-held aversions and selective tastes are cultural luxuries that are not usually associated with a starvation level subsistence.

Leisure and Work -- The getting of food is the most important
462 single activity in Bushman life. This task occupies, on the
[512] average, 25 per cent of the womens' days and 40 per cent of
the mens' days. The significant point, however, is that the
majority of the time of both sexes is spent in non-subsistence
● [222] activities such as resting, talking, and visiting. In a typical
[574] work period, a Bush woman will gather one day and then spend
two or three days either resting in camp or visiting other camps,

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574 before she goes out to gather again. The hunters tend to
462 work more frequently than the gatherers. Typically a man will
[224] go out on two or three consecutive days and then spend two or three days in camp. Unlike the women, who maintained a consistent gathering routine throughout the year, the hunting activity of the men came in intermittent bursts. It was not unusual for a man to hunt avidly for a week and then do no hunting at all for two weeks. Since hunting was an unpredictable business, and subject to magical control, hunters would sometimes experience a run of bad luck and would stop hunting for a month or longer. For instance, ≠oma, the best hunter of the Dobe camp, did not hunt at all for a three-month period in 1963 because he said that his luck had left him. He remained in camp, apparently awaiting inspiration, while his wife patiently provided food for him. Most of the men of the Dobe camp went through similar periods of inactivity.

883 Non-productive Camp Members -- People who are under twenty
[887] years and over sixty-five years of age contribute very little to the food input of a camp. Young women are not expected to
[582] contribute food until they are married. Girls typically marry
[574] between the ages of fifteen and twenty, so it is not unusual to find healthy, active, teenagers visiting from camp to camp while their older relatives provide food for them. The assumption of adult responsibility by the boys is even more delayed.

2: Schapera E-4, 5 (no date)1930
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CHAPTER IV

SOCIAL ORGANIZATION

TRIBE AND HUNTING BAND

ALL the Bushmen in their native condition lead a nomadic hunting 222
and collecting life, roaming about in search of the game and wild 224
vegetable foods upon which they depend for their existence. The [182]
conditions of their subsistence necessarily prevent them from banding
together permanently in any considerable numbers. Wherever they 621
still retain to any marked degree their original mode of life and
organization they are found scattered over the land in small separate
communities.[1] Each such community will be spoken of here as a
hunting band. The members of a band share a common life, they see
one another constantly, they co-operate in many ways, and they are
all as a rule friendly and on fairly intimate terms. Each band also [619]
has occasional relations with other neighbouring bands, through
intermarriage and trade, and visitors may pass from one to another.
On the other hand, there are often quarrels between neighbouring [628]
bands, which may result in a prolonged state of feud and even lead
directly to warfare.

The various bands among the Heikum are generally referred to 621
among each other by a name which indicates either the locality in 101
which they live, or describes some physical or other characteristic
of the band itself or of its locality. The *se-khoin*, for example, are the
people of the *seb* or plain; the */gom-khoin* the people who eat the

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[1] The social organization of the Bushmen is one of the least-known aspects of their culture, and sadly needs careful and detailed investigation. The most reliable sources of information refer almost exclusively to the North-Western tribes: Passarge, *Die Buschmanner der Kalahari*, 1907; Kaufmann, "Die Auin," *Mitt. deuts. Schutzgeb.*, xxiiii (1910); (Miss) D. F. Bleek, "Buschmänner von Angola," *Archiv Anthrop., N.F.* 21 (1927); *idem*, *The Naron*, 1928; *idem*, "Bushmen of Central Angola," *Bantu Studies*, iii (1928); L. Fourie, "Customs of the Hei-//om Bushmen," *J. SW. Afr. Sci. Soc.*, i (1925–6); *idem*, "The Bushmen of South-West Africa," in *The Native Tribes of South-West Africa*, 1928. The relevant literature on the other tribes is for the most part fragmentary, although some valuable data on the Namib Bushmen are given by Seydel, "Aus der Namib," *D. KolBl.*, xxxi (1910), and by Trenk, "Die Buschleute der Namib," *Mitt. deuts. Schutzgeb.*, xxiii (1910). Where no special reference is made to any particular tribe the analysis given above must therefore be regarded as applying especially to the North-Western tribes, who are also the only Bushmen still leading a fairly independent life. [114]

2: Schapera E-4, 5 (no date) 1930
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CHAPTER VI

ECONOMIC AND POLITICAL LIFE

LAND TENURE

EACH hunting band among the Bushmen, as we have already noted, 423
claims rights of ownership over a certain stretch of land, and 621
vigorously resents trespass upon it by members of other bands.
Within the band land is owned in common. The hunting territory
belongs to the whole band, and all the members of the band have
an equal right to hunt and collect over any part of it and to use the
water in it. Often the members of the band are scattered apart, so
that the same territory is exploited by the inhabitants of several
different encampments. These encampments, as we have seen, are not [361]
made up of any fixed number of families, but fluctuate a good deal
in size. Whatever their momentary disposition, however, their [221]
inhabitants always roam within a definitely limited area, and it is
always the members of the same band who establish these different
encampments within its bounds.

As the Bushmen practise neither agriculture nor pastoralism, there 423
is no question of cultivation or grazing rights. There is said, however,
to exist a certain private ownership of land among the Auen, in the [222]
sense that when a man burns a patch of veld in order to promote the
growth of veldkos on it, he alone has a claim to its products. Others,
even people living at the same encampment, may not gather veldkos
on this patch without his permission.[1] Somewhat analogous to this 222
are the private rights recognized by all Bushmen over objects found 422
in the veld. A man who finds an ostrich nest with one or two eggs,
for example, sticks an arrow in the ground close by as a sign of ownership, and waits until the tale of eggs is complete before carrying them
off. Should another man take the marked eggs, the first finder follows
the spoor to the thief's hut, and demands them back. If they are [685]
restored, there is no fighting, but the thief does not escape reproaches [626]
for wrongdoing, especially from the neighbours of the finder; while
in case of refusal bloodshed almost inevitably follows. In the same

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[1] Kaufmann, "Die Auin," 155.

222 way private rights can be indicated over honey in a nest, or by a woman 422 who has located a spot with a specially abundant supply of veldkos. Whoever removes anything from such places is regarded as a thief.[1] It must be emphasized, however, that rights of this nature are only [423] acquired by chance, and that apart from them there appears to be no restriction at all upon the free exploitation of the hunting territory and all its resources by any member of the band.

HUNTING

224 Once they have passed through the puberty ceremonies, boys and [883] girls participate in the full economic life of the band. All the men [462] are hunters, and spend the greater part of their daily life in pursuing or ensnaring game. Their methods of hunting vary with the nature of the intended prey, and according to the season of the year.

Weapons

The principal method is by means of pursuit and the use of weapons. 411 The latter amongst all the Bushmen consist primarily of the bow and arrow.[2] The bows are small, and on the whole fairly crude and of simple make (Plate IXd). They are as a rule prepared from the wood [824] of the *Grewia flava*, a thin length of which is cut and roughly shaped is such a way as to taper gradually almost to a point at the ends. The [283] string is made either from two thin sinews twisted together or some- [237] times, among the Northern tribes, from wood fibre worked into a [284] strong cord. It is attached by a simple slip-knot and wound tightly several times round the basal end of the bow-stave, to which a small leather collar or sinew band is usually fixed to prevent the string from slipping when hitched over it. The stave is then bent and the string knotted to the other end, where it is kept in place by a leather band. The bow is kept permanently strung. Its stave is frequently strengthened with additional sinew bindings, especially round the centre, which prevent it from splitting and also form a convenient grip for the hand.

The arrows are complex in structure and vary considerably in

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[1] Hahn, "Die Buschmänner," 120; *idem*, in *Trans. S. Afr. Phil. Soc.*, ix (1896), p. xvii; Vialls, "The Masarwa," 32; Kaufmann, loc. cit.; D. F. Bleek, *Naron*, 36; Lebzelter, "Bei den !Kuñ-Buschleuten," 13.

[2] Schapera, "Bows and Arrows of the Bushmen," *Man*, xxvii (1927), 113–17; cf. Stow, *Native Races of S. Africa*, 68–71; Kaufmann, op. cit., 143–4; van Rippen, "Notes on Some Bushman Implements," 80–5; Gretschel, "Die Buschmannsammlung Hanneinann," 94–6, 99–100.

224 returning to the camp, sleep under the central tree and avoid sexual intercourse with his wife, lest the poison prove ineffective and the animal escape. The meat of an animal killed by a dog may not be
[841] eaten by women or by any men whose wives are menstruating; this is to prevent bad luck befalling the dog in the pursuit of game. Any want of success is generally attributed to some chance accident; for example, a man who has had bad luck in hunting while his wife was menstruating will not hunt again while she is in that condition, nor will she eat any of the *ǂnoe-di* at such times.[1]

These practices and beliefs obviously represent only a small portion of what must be an elaborate series of usages relating to hunting, but they suffice to indicate how the Bushmen, fully aware of the uncertainty attendant upon their efforts, seek to relieve their apprehensions and to obtain confidence by the aid of magic and taboo.

COLLECTING

224 Hunting in the old days was unquestionably the principal source
136 of subsistence in Bushman life. But with the decrease of the game
648 in their region and with the enforcement against them of the game
●222 laws framed by the white man, its importance is diminishing, and at the present time the Bushmen depend very largely for the means of existence on the wild vegetable foods growing in the veld.

[241] Agriculture in any form is altogether unknown to them in their
222 traditional mode of life. The nearest they have got to it is found
224 in the practice observed by the North-Western tribes of burning the
311 veld at the end of the dry season.[2] This, it is said, is done primarily in order that the edible bulbs, roots, etc., should come up better during the approaching rainy season. It is also used, however, as a means of hunting, for the men spread round the fire in a semicircle and drive all the game rushing from it before them in a certain direction where some hunters are lying in wait; moreover, the new grass growing soon after the burning attracts the game, which returns to the area, and thus makes it good hunting ground. Incidentally the burning serves to kill off snakes, scorpions, and other noxious creatures. Men may only
[423] burn in their own territory; to do so across the border, or to gather wood where others have burned, is a great offence. In former times,
[622] among the Naron, the chiefs are said to have regulated the burning;

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[1] Fourie, "Customs of the Hei-//om," 56; *idem*, "Bushmen of S.W. Africa," 102.

[2] Jodtka, "Reise nach dem Okavango," *D. KolBl.*, xiii (1902), 491; Kaufmann, "Die Auin," 147, 156; D. F. Bleek, *Naron*, 17.

2: Schapera E-4, 5 (no date) 1930
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nowadays the thing is done in a haphazard manner, and generally passes as an accident. 222 [224] [311]

The collection of veldkos is done by both men and women; but whereas with the former it is incidental to their hunting, the latter are collectors only, and set out every day, usually in company, to go over several miles of land. [462] The digging-sticks they use are from 3 to 4 feet long, and consist of pieces of hard wood, pointed at one end. [412] In the south, where the veld is hard, and in the mountainous parts of the east these sticks were sometimes tipped with a buck's horn and weighted by means of a perforated stone ball passed over their lower end and wedged in (Plate IX); [184] but in the Kalahari, where there is only sand to cope with, this is never found. The foods gathered are chiefly roots, bulbs, ground nuts, berries, melons, and, in fact, anything at all edible, the food naturally varying with the season of the year. At the same time, the women also catch all sorts of small animals which they come across—iguanas, tortoises, frogs, locusts, flying ants, etc.—and they gather dry sticks for the evening fire.

Among the Heikum the following ceremony is observed in connection with the gathering of veldkos by the women. 222 622 "It is practised," says Fourie,[1] "when the fruit of the *ǀhuin* ripens, generally after the onset of the big rainy season in the month of February. On a certain day, appointed by the *gei-khoib*, all the women, under the guidance of the *gei-khois*, set out to collect the first fruit of the *ǀhuin*, the men in the meantime remaining in the *ǁgaus*. The trees from which the fruit is to be gathered are indicated by the *gei-khois*. On the return of the women to the *ǁgaus* they deposit the bags containing the fruit in front of the hut of the *gei-khoib*. The *gei-khois* then fills four or five basins by taking a little from the bag of each woman and places them under the *!heis*. Her husband now kindles the *!hei-ǀais*, and, after having applied *ǀnorab* and *dabas* to appease the fire for a plentiful harvest, takes a handful or two of the fruit and eats it. The fruit is now free and both men and women may eat it." There is no known name for this ceremony, but the first fruit is called *!gao-ei-ǀun*. [184] The ceremony in this form is not found in any of the other Bushman tribes, but is met with also in slightly different form among the Bergdama. [171] The possibility of borrowing must therefore again be kept in mind; but, whether borrowed or not, the ceremony is of importance as indicating the development of a special ritual in connection with one of the principal sources of food supply.

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[1] "Customs of the Hei-//om," 56–7; *idem*, "Bushmen of S.W.A." 98–9.

A somewhat different ceremony, also connected with the collection
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622 of veldkos, is held by the Kung.[1] Once a year, when the edible bulbs
[184] of the veld are beginning to ripen at the beginning of the rainy season,
the head of the band on a morning fixed by him calls together all the
inhabitants of the camp before sunrise. He then takes up some faggots
mixed with dry grass and straw, and all squat down in a circle around
him. On the ground near the firewood lies a piece of wood, in which
is bored a hole. In this hole is placed a freshly-broken twig of the wild
fig-tree. A lit pipe is handed to the headman. He takes it in both
hands, held palm to palm, and twists it about over the wood until its
burning content falls on to the grass, which becomes kindled into
flames. During this performance he repeats the following prayer to
[782] Huwe, a supernatural being: "Father, I come to you, I pray to you,
[539] please give me food and all things, that I may live." When the fire
has burned out the members of the band scatter to seek the new bulbs,
which up till now they might not touch.

222 These two ceremonies are the only ones on record indicating the
presence of a special cult among the Bushmen in connection with the
184 gathering of veldkos; but, as will be shown later, in all the Bushman
tribes there are numerous other ritual observances and beliefs which
may be regarded as centring in the sources of food supply, although
they are somewhat different in nature from the two just described.

312 Water must also be fetched every day from the waterhole. This
[462] is generally the task of the children, but if the distance is far the
[857] women go, and occasionally even the men. The water is stored in
[415] ostrich egg-shells in one end of which is bored a hole which can be
[237] plugged with grass. These are carried about in a net of woven fibre
or in skin bags. The stomach of a buck is also sometimes used as a
water-bottle.

312 The supply of water is one of the most acute problems facing the
182 Bushmen in the Kalahari and Namib Deserts. It affects their mode of
life to a very considerable extent, for it not only regulates the
[221] migrations of the people, but also their cohesion, since, as we have
[621] seen, in many cases the different families constituting a band live
together only in the rainy season, to scatter apart as soon as the dry
season returns. Moreover, upon the supply of water depends the
growth both of the veldkos and also of the grass upon which the game
lives, so that the whole subsistence of the Bushmen is intimately bound
[823] up with it. This intimate dependence, as we shall subsequently see,

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[1] Vedder, "Grammatik der !Kū-Buschmannsprache," 6–7.

2: Schapera E-4, 5 (no date)1930

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Bushmen FX10

177 they are no longer self-sufficient. Contact with other peoples has
439 made them familiar with various articles, especially iron and tobacco,
which they now covet very greatly and in order to obtain which they
carry on an extensive system of barter. Even within the band itself
[437] there is a good deal of barter in such things as meat, clothing, veldkos,
and utensils. Berries and roots, for example, are exchanged for
tobacco or beads, skin bags for poisoned arrows, and so on. Trading
[484] visits to other bands are also frequent. But the most common form
of barter is with peoples of other races, especially the Bantu.

439 The !O Kung of Angola, unlike all the other Bushmen, do not go
[184] out into the veld to collect vegetable foods. These are obtained by
barter. The younger men hunt, and trade part of the meat and skins
● [222] obtained for the cereals, maize, potatoes, manioc, etc., of the Bantu
among whom they live. Honey and wax are also collected and traded,
sometimes with the Bantu for food and tobacco, now and again to
Europeans for powder and cartridges. Wax is a good article of trade
with Portuguese traders, and the Bushmen are therefore assiduous
in collecting it. Besides foodstuffs they also obtain pots and baskets
from the Bantu, as well as metal wares such as knives, arrow and spear
heads, and beads.[1]

The Bushmen of the Okavango swamps, again, trade ostrich egg-shell beads, ivory, ostrich feathers, skins and horns with the inter-dwelling Bantu in return for tobacco and dagga, as well as iron and such iron goods as spear heads, hoes, and knives; while the Namib Bushmen exchange similar objects with Hottentots and Europeans for blankets, knives, tobacco, and coffee.[2]

Among the North-Western tribes there is a whole system of trade
438 relations between different tribes, extending from the Okavango in
the north down almost to the Molopo.[3] In this the Naron and the
Auen play the part of intermediaries, obtaining from the tribes further
north the objects they desire, and then bartering them again further
south as occasion arises. Egg-shell beads and tobacco are standard
[436] articles in this trade, in the sense that they can always be bartered and
may even be said to have a fixed value. From the Naron the Auen
438 procure skin garments and bags, for the making of which the former
439 are famous, giving them in return wooden pots, dishes, and spoons

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[1] D. F. Bleek, op. cit., 52–3; *idem*, "Bushmen of Central Angola," 108.

[2] Passarge, "Das Okawangosumpfland," 701; *idem*, *Die Buschmänner*, 118–19; Trenk, "Buschleute der Namib," 166.

[3] Passarge, *Die Buschmänner*, loc. cit.; Kaufmann, "Die Auin," 152–3; D. F. Bleek, *Naron*, 37–8.